

Announcing the  
**FINESCALE MODELER**  
SWEEPSTAKES!  
Details on pages 66 and 67.

ICD 08285

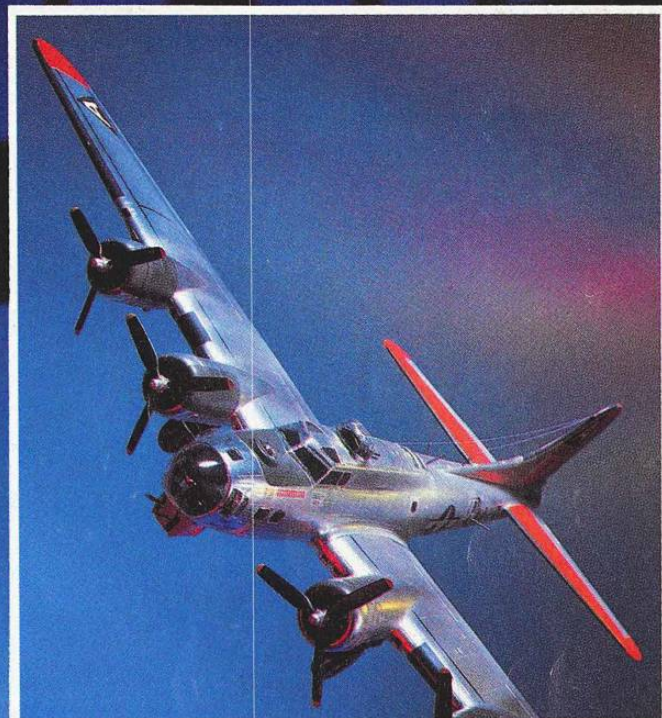
# FineScale MODELER<sup>®</sup>

NOVEMBER/DECEMBER 1984 / \$2.50

Casting resin parts in RTV molds

Realistic model photography  
with airfield dioramas

Natural metal model aircraft  
— the easy way



The  
**FineScale  
MODELER**

**SWEEPSTAKES**



Building your first epoxy resin car kit



74820 08285



# BOEING 767

**1/100 AUTHENTIC SCALE MODEL KIT**



## 1/100 SCALE PASSENGER JET AIRLINER SERIES



**ITEM No.150**  
**1/100 BOEING 727**  
**JAL DECAL**  
(ANA, UA, LH DECALS AVAILABLE)



**ITEM No.340**  
**1/100 BOEING 747**  
**JAL DECAL**  
(ANA, UA, LH DECALS AVAILABLE)  
(1/144 JAL ANA, 1/200 JAL ANA AVAILABLE)



**ITEM No.513**  
**1/100 DC-10 JAL DECAL**  
(LH DECAL AVAILABLE)



**ITEM No.427**  
**1/100 L-1011 TRISTAR**  
**ANA DECAL**  
(BA DECAL AVAILABLE)



IMPORTED AND DISTRIBUTED BY:  
EMPIRE PACIFIC LTD.  
10805 E. ARTESIA BLVD.  
CERRITOS, CA 90701



## EDITORIAL

Editor: BOB HAYDEN  
Associate Editor: BURR ANGLE  
Associate Editor: PAUL D. BOYER  
Editorial Assistant: MARCIA STERN  
Editorial Secretary: MONICA BOROWICKI  
Librarian: GEORGE H. DRURY

## ART

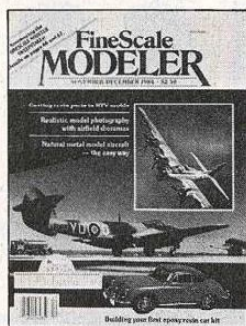
Art Director: LAWRENCE O. LUSER  
Staff Artist: WELLS S. MARSHALL, III  
Staff Photographer: A. L. SCHMIDT  
Staff Photographer: PAUL A. ERLER

## EXECUTIVE

President and Publisher: JAMES J. KING  
Editorial Vice President: DAVID P. MORGAN  
Vice President, Sales/Marketing: W. A. AKIN JR.  
Executive Art Director: GEORGE A. GLOFF

## SALES

Ad Sales Manager: FREDERICK J. HAMILTON  
Circulation Sales Manager: THOMAS J. D'AMICO  
Sales Promotion Manager: GARY W. DOLZALL  
Advertising Production Manager: ART CURREN  
Advertising Production Assistant: SARA BENZ



## ON THE COVER

Photographer and modeler Vic Roseman calls his diorama photo of the Gloster Meteor "British Secret Weapon." Vic doesn't keep his photo techniques a secret, though, and you'll find them explained in detail beginning on page 54. David Jones tells all, too, about plating that B-17 with a micro-thin skin of real aluminum (page 38), and Wayne Moyer returns to FSM's pages to build a 1/43 scale Porsche 356B from an epoxy resin kit (page 42). Finally, don't miss the kickoff of FSM's exciting Sweepstakes on pages 66 and 67! Photos by Vic Roseman, Gerry Humbert, and Wayne Moyer.



FINESCALE MODELER (ISSN 0277-979X) is published bi-monthly (six times a year) by Kalmbach Publishing Co., 1027 N. Seventh Street, Milwaukee, WI 53233, (414) 272-2060. SUBSCRIPTION RATES: 6 issues, \$12.50; 12 issues, \$23. With foreign postage (outside the United States) 6 issues, \$15.50; 12 issues, \$29. © 1984, Kalmbach Publishing Co. Title registered as trademark. Second-class postage paid at Milwaukee, WI, and at additional offices. Printed in U.S.A. All rights reserved. This publication may not be reproduced in part or in whole without written permission from the publisher, except in the case of brief quotations used in reviews. POSTMASTER: Send address changes to FINESCALE MODELER, Kalmbach Publishing Co., 1027 N. Seventh St., Milwaukee, WI 53233. Canadian second-class postal permit 9589. Send Canadian address changes to Kalmbach Publishing Co., P. O. Box 1051, Fort Erie, Ontario L2A 5N8.

FINESCALE MODELER assumes that such material as letters, club news, news releases, new-product information, etc., is contributed gratis. Feature articles and scale drawings are paid for on acceptance. Photographs accepted separately are paid for upon publication. Leaflets outlining in detail the preparation of features, photographs, and drawings are available on request from the Editorial Secretary. Unsolicited material, if not accepted, will be returned only if postage and wrappings are provided for this purpose. FINESCALE MODELER assumes no responsibility for the safe return of unsolicited material.

# FineScale MODELER

VOL. 2 NO. 7 NOVEMBER/DECEMBER 1984



Page 20



Page 22



Page 37

- 20 FSM SHOWCASE: Jeff Easley's eye-catching giant**
- 22 Superdetailing Tamiya's 1/35 scale M1 Abrams**  
Data and techniques for making a fine model even finer STEVE ZALOGA
- 31 Iroquois Warrior, French and Indian War**  
Number 3 in the AMERICAN DRESS AND DETAIL series R. J. STAFFORD
- 32 Casting resin parts in RTV molds**  
An easy way to reproduce hard-to-make scratchbuilt parts DAVID MERRIMAN
- 37 A computer scale converter**  
Don't rush out to buy a computer just to run this program, but if you already own one... DAVID CHEVALIER
- 38 Natural metal model aircraft — the easy way**  
It's not paint, it's not foil, it's real aluminum plate DAVID W. JONES
- 42 Building your first epoxy resin car kit**  
A Porsche 356B in 1/43 scale WAYNE E. MOYER
- 46 Basic bases**  
Inexpensive materials and simple techniques to accent prized models JEFF BRODZIK
- 54 Realistic model photography with airfield dioramas**  
A gallery of World War Two photos taken just last year VIC ROSEMAN
- 58 Modeling the Soyuz spacecraft**  
Accurizing Revell's 1/96 scale Russian orbiter MIKE MACKOWSKI

## DEPARTMENTS

- |                                     |                                  |
|-------------------------------------|----------------------------------|
| <b>2c Update</b>                    | <b>38a Special Hobby Catalog</b> |
| <b>6 Reader Forum</b>               | <b>51 FSM Clinic</b>             |
| <b>11 Workbench Reviews</b>         | <b>64 Book Briefs</b>            |
| <b>16 FSM Looks at New Products</b> | <b>72 Tips and Techniques</b>    |
| <b>18 From the Editor</b>           | <b>74d Index to Advertisers</b>  |



# BADGER gives you great tips.

The BADGER Model 150 is the perfect tip and the perfect tool for finishing scale models. This finely crafted dual action air-brush is ideal for achieving special effects such as smoke, fire and weather damage, etc. The Model 150 offers a choice of three head assemblies for more versatility in the type of materials you can spray. The bottom feed feature makes it suitable for left or right handed modelers.

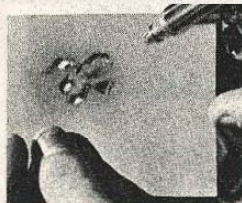
BADGER'S Foto/Frisket Film is a transparent self-adhering masking and stenciling material. It is ideal for customizing and

making your own logos, decals and insignias. Great for camouflage techniques. Available in convenient sheets and rolls.

BADGER'S Fluid Microscreen Filter is designed for use with all air-brushes that use jars or bottles. It stops paint or foreign particles that might pass through the air-brush and cause clogs. The filter slides on and off easily for quick cleaning.

BADGER gives you even more great tips in their Hobby & Craft Guide to Air-Brushing.

Two camouflage tips are shown here.



1. Using a mask as shown, spray through the openings, move the mask over the next area to be sprayed. Hold the mask at least 1/2" from surface for a soft edge effect.



2. Another way to achieve the mottled effect is by free-hand spraying. Set the spray width to fine and hold the air-brush close to the surface using tight, erratic hand motions.

Ask for BADGER products at your local hobby, craft or art store or write Dept. 84.13 for full color catalog BA 300 Vol. 6. Please enclose \$1.00 to cover postage and handling.

Prices slightly higher in Canada.

©BACO 1983



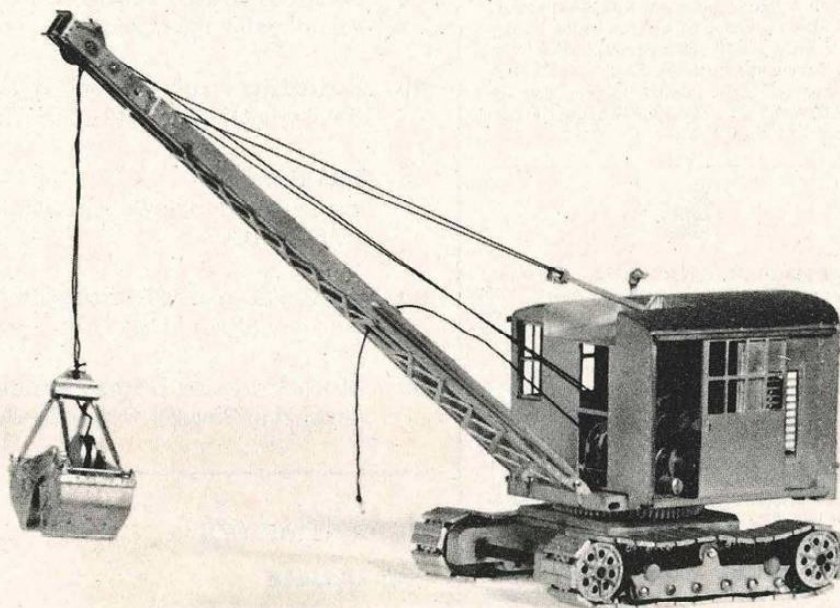
**BADGER AIR-BRUSH CO.**

9128 W. BELMONT AVE. - FRANKLIN PARK, IL 60131

Dist. in Canada by:  
HOBBY INDUSTRIES - 24 Ronson Drive - Rexdale, Ontario M9W 1B4

Photo by Robert Sorg

**AH&D Gopher Crane—**  
OMI # 1350. Perfect for any logging operation. OMI offers you accurate details plus working treads, cast diesel engine, sliding doors, hand operated drums to lower and raise boom. Whether in a diorama or railroad scene, this jewel is right at home. Built by M. S. Models of Korea in HO scale.



**Overland Models, Inc.**

RR 12, Box 445, Muncie, Indiana 47302



## FSM UPDATE

FSM invites manufacturers and publishers to submit news releases, photos, product samples, and new catalogs. A description of our new-product announcement and review policies is available from FSM Update, FINESCALE MODELER, 1027 North Seventh Street, Milwaukee, WI 53233.

**FSM Sweepstakes.** If you enter the FSM Sweepstakes, you'll have a chance to win a complete workshop, including a workbench, hand tools, lathe, two airbrushes, air compressor, paints, drill set, and more. The grand prize drawing will be held in March 1985. Drawings will be held in January and March to award airbrushing outfits, sets of ten Kalmbach scale modeling books, and five-year subscriptions to FSM. See pages 66-67 for details.

**Kit releases.** Fujimi Mokei Co., Ltd., 21-1 Toro, 4-Chome, Shizuoka City, Japan, has released a 1/72 Japanese Navy B7A1 Shooting Star (Grace).

A 1/24 Mustang Boss 302 hood conversion kit is available for \$4.00 postpaid from William Hitchen, 6163 North Ozanam Avenue, Chicago, IL 60631. Hitchen also sells a solid hood insert for \$1.20 postpaid.

New from KPL Models, 703 Cannon Road, Silver Spring, MD 20904, are 1/72 T.V. and Fokker T.IX Dutch World War Two bomber kits. Each kit sells for \$7.95; add \$1.50 postage within the U.S. Outside the U.S., inquire about shipping charges before ordering.

Leisurewire Ltd., P.O. Box 12, Watlington, Oxfordshire OX9 5EN, England, has introduced a structure modeling kit, the Plawco Construction System. Leisurewire says this kit will allow modelers to simulate almost any type of structure. Each kit comes with a 24-page handbook, 100 PVC-covered steel rods 20" long and .16" in diameter, 500 connectors and adapters, and a special adhesive; it sells for approximately \$70.00.

Two 1/12 Tamiya motorcycles now avail-

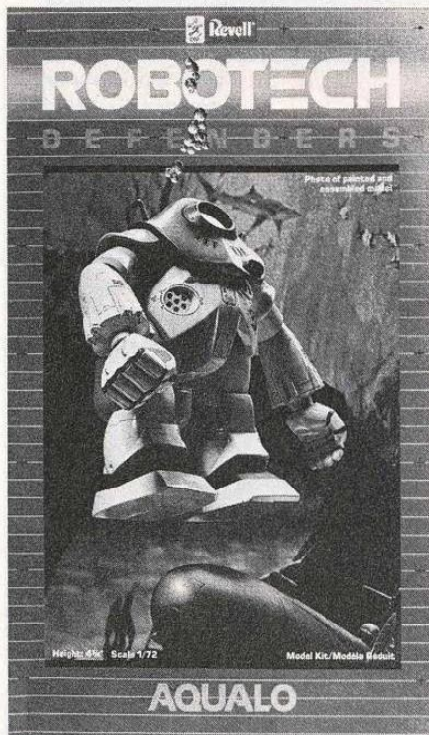
able from Model Rectifier Corporation, 2500 Woodbridge Avenue, P.O. Box 267, Edison, NJ 08817, are No. 1431, Honda VF750F, and 1432, Honda NS500 Grand Prix Racer.

Monogram Models, Inc., 8601 Waukegan Road, Morton Grove, IL 60053-2295, has added the following kits to its line: No. 6016, Masters of the Universe Roton assault vehicle; 6034, 1/48 ground attack combat diorama with Sherman tank and Fw 190; 6035, 1/48 tank hunter combat diorama with Panther tank and P-51B Mustang;



6036, 1/32 Blue Thunder helicopter; 6064, 1/48 Heritage Edition de Havilland Mosquito; and 6065, 1/72 Heritage Edition HU-16B Albatross.

Recent Robotech Defenders kits from Revell, Inc., 4233 Glencoe Avenue, Venice, CA 90291, are No. 1148, Aqualo; 1149, Ziyon; 1150, Thoren; 1151, Zoltek; 1152, Condar; 1153, Talos; and 1154, Gartan. Numbers 1148-1152 are 1/72; 1153 and 1154 are 1/48. Revell also has released four Robotech



Changers kits: No. 1400, 1/38 Nebo; 1401, 1/72 Orbot; 1402, 1/72 Vexar; and 1403, 1/72 Axoid.

Twentieth Century Imports, 4732 East Pearl, P.O. Drawer 3348, Boulder, CO 80303, has announced the availability of the following Japanese science-fiction kits: five 1/48 kits from Aoshima; six kits from Imai; three 1/100 metalized kits from Aree; 23 kits

## ORIGINAL COLOR SLIDES

■ Hundreds of slides listed each month

■ All types of aircraft listed

■ Quality original slides

Send for most recent copy of **FREE** monthly list or send 50¢ for list & sample slide.

# AERO RESEARCH

4672 Flamingo Park Ct.-B  
Fremont, CA 94538

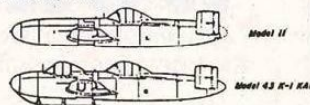
arru-scale  
DECALS: PLUS



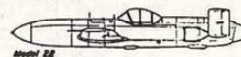
ACCU-SCALE  
3 Clayton Ave.,  
Fond du Lac, Wis. 52325

VACUFORM KITS:

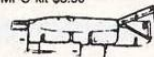
VJ-1 OHKA Model 11/43;  
1:32 scale \$10.00



VJ-2 OHKA Model 22;  
1:32 scale \$7.50



CG-1 FW 190 13mm cowl;  
for 1:24 MPC kit \$3.50



CA-1 V-100 turret  
for M-113; 1:35 scale  
\$3.50



DECALS: Still available;

AD-1 U.S. letters & numbers; \$12.50 / set

AD-2 LUFTWAFFE letters & numbers; 1:32 \$17.50 / set

AD-3 Same as AD-2 only 1:48; \$17.50 / set

Please add 20% shipping & handling  
Mass. residents add 5% sales tax

## PLASTIC MILITARY MODELS



San Diego's only hobby store devoted **exclusively** to the plastic modeler.

We carry a full range of domestic and foreign made kits, including vacuforms.

We also have decals, paints, books and airbrushes. In addition to military models, we carry an extensive line of plastic car kits.

**16769 Bernardo Center Dr.  
San Diego, CA 92128  
451-3591**



# SUPERBLY DETAILED AIRCRAFT PRINTS

Signed, limited editions (pencil sketches) \$23.00 each, postage paid. Satisfaction guaranteed.



1.	T-43	14 X 31
2.	T-37	14 X 29
3.	T-38	14 X 29
4.	F-4C	18 X 37
5.	F-4E	18 X 37
6.	F-16	14 X 29
7.	F-15	16 X 29
8.	A-10	14 X 29
9.	C-130E	14 X 31
10.	C-141A	23 X 29
11.	KC-135	16 X 29
12.	P-51	18 X 29
13.	B-52H	12 X 36
14.	F-86	18 X 24
15.	T-2C	12 X 27
16.	B-17G	21 X 22
17.	C-141B	14 X 31
18.	F-4D	18 X 37

Please order by number.

Send large SSAE for full list of available prints.

VISA/MasterCard Accepted.

**densa fine art 536 MORSE AVENUE SCHAUMBURG, IL 60193**

## the MODEL WORKS

We feature what we feel are the finest lines of scale models.

We do not have a catalog available, write for specific items desired. Include SSAE.

- Wide range of car kits-including Tamiya and 1/43 metal
- Military - Armor & Aircraft 1/700 Waterline Ships & Dioramas
- Reference Books, Periodicals and Photos
- Paints, Decals, Tools, and Scratch Builder Materials

1655 E. COLORADO BLVD.

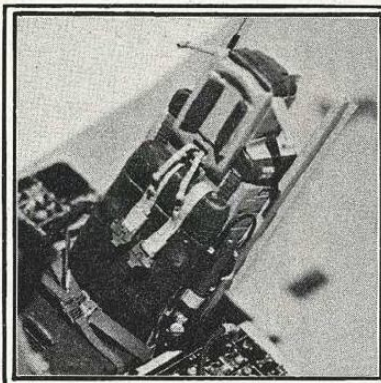
PASADENA, CALIFORNIA 91106

818-793-6061



1358 Stephen Way  
San Jose Ca. 95129  
(408) 252-7422

**NEW!** From Waldron Model Products. Jet Seat Belt Buckle Set. Consists of three frames of parts. Includes parts for the F-16A, (set includes Firing Control Handle, Harness Release and Seat Adjusting Knob for Aces II). Parts for the F-15 Buckle Set, the F4-Phantoms, F104 Star Fighter, the F5 and the F14. Parts may be applicable to other aircraft. This set should make detailing jet cockpits much easier. Send for prices.



**NEW! NEW!** Jet Mirrors in 1/72nd, 1/48th or 1/32th scales. \$5.00 per set each scale. (6 mirrors per scale in each set).

Add 10% of order, postage and handling. For fastest return include postal money order. Foreign orders, add 15% of order. International money order or check drawn on U.S. bank for U.S. funds. California residents add 6.5% state tax.

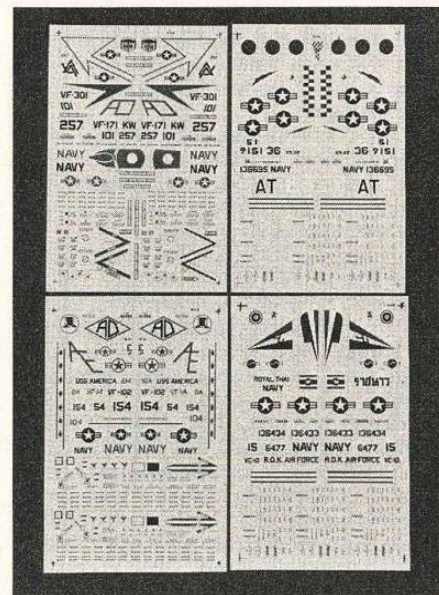
Please send 50 cents for flyer.

**DEALER INQUIRES INVITED**

from Nichimo; three 1/24 kits from Takara; two 1/20 kits from Nitto; and 1/60 Votoms series kits from Union.

Wings 72 & Wings 48, Inc., 3349 Wildridge Drive NE, Grand Rapids, MI 49505, has released vacuum-formed kit No. VW488, a 1/48 Chance Vought O2U-1 Corsair, \$16.95. Add 15 percent for postage and handling in the U. S. Outside the U. S., add 20 percent for surface mail or 50 percent for airmail; payment must be in U. S. funds.

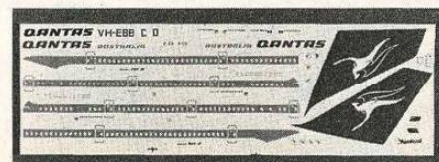
**Decals.** Detail & Scale, Inc., announces the release of decals designed to fit the Monogram 1/48 Convair F-106A Delta Dart. Sheet No. 0448 features markings for the 48th Fighter Interceptor Squadron (FIS) in both 1972 and 1976 liveries. Sheet 0548 has markings for 94th FIS, 460th FIS, and the Air Defense Weapons Center. The decal sheets are available for \$3.50 each plus 35 cents postage from Aeolus Publishing Limited, P. O. Box 2643, Vista, CA 92083.



The latest Microscale Decals released by Krasel Industries, Inc., 919 Sunset Drive, Costa Mesa, CA 92627, include 1/72 markings for low-visibility Phantom IIs: Sheet No. 72-440 includes an F-4N from VF-171, an F-4S from VF-301 in the Heater-Ferris camouflage, and an F-4S from VF-302; sheet 72-441 has an F-4N from VF-154, an F-4S from VF-103, and an F-4S from VF-171. Korean, Thai, and U. S. Navy S2F Trackers are featured on sheet 72-442, while sheet 72-443 has one Japanese and two U. S. Navy Trackers.

In 1/48, Microscale offers low-visibility F-14 Tomcats of VF-14 and VF-102 on sheet No. 48-215, VF-74 and VF-124 on sheet 48-216, and VF-211 and VF-142 on sheet 48-217. Sheet 48-218 has low-visibility Phantom IIs from VF-171 and VF-301.

Roodecals of Australia has released decal sheets showing present markings of a Qan-





tas 747. The sheets are available in three scales from Croydon Impex, 6 Waid Terrace, Farm Road, Anstruther, Fife KY10 3EZ, Scotland: 1/200, £2.42; 1/144, £2.75; and 1/125, £2.92. Add 35p per order for surface mail postage. MasterCard is accepted. (Croydon Impex has a special offer for FSM readers. If you order any decals — Roodecalcs, Hobby 2000, or IPMS Belgium — before December 31, 1984, and enclose a copy of this paragraph, your order will be sent airmail for the normal surface mail rate.)

**Paints and adhesives.** New from Franklin Chemical Industries, Inc., 2020 Bruck Street, Columbus, OH 43207, is Home, Shop & Craft Glue. Franklin says that this is the thickest, fastest-drying glue available for porous and semi-porous materials.

Super Glue Corporation, Hollis, NY 11243, has introduced On-the-Spot Super Syringes. Adhesives available include contact cement, professional wood, quick-setting epoxy, super-strength epoxy, and household cement.

**Figures.** Artistic Enterprises, 9 Winston Crescent, Whitby, ON, Canada L1N 6Y3, produces 54 mm painted foot and mounted



figures. Foot figures sell for \$30.00 each, while mounted figures cost \$60.00. A complete price list is available for free.

Four new figures from Almond Sculptures are available from Historex Agents, 3 Castle Street, Dover, Kent CT16 1QJ, England: No. AS/A6, 90 mm mounted Polish winged hussar, circa 1683, £35.00; No. AS/A7, 90 mm Fusilier Garde Francaises, 1720, £12.10; AS/A8, 90 mm Franche de la Marine, 1750, £12.10; and AS/AF2, the Falconer, 110 mm, £14.95.

New 54 mm Chota Sahib figures available from Historex, £3.30 apiece, are No. BI/21, sergeant, Royal Marines, 1980; BI/22, corporal, RMP Northern Ireland, 1969-84; BC/7, Major Skinner's horse, 1900; and S/5, 17th Lancer officer, 1825. Three new 80 mm figures from Mil-Art, £7.00 apiece, are No. F22, grenadier, 12th SS Panzer Division, Normandy, 1944; F23, officer, Royal Scots Fusiliers, Zulu War, 1879; and F24, officer,

SAS Regiment, northwestern Europe, 1944-45. Sovereign Miniatures has released No. SMF/30, medieval handgunner, £5.75, and SMM/5, mounted Roman catafract, £14.95, both 75 mm.

Model Rectifier Corporation, 2500 Woodbridge Avenue, P. O. Box 267, Edison, NJ 08817, has added No. 3629, German soldiers at rest, to its 1/35 Tamiya military figures series. Also new is 3628, livestock set with ten species of animals.

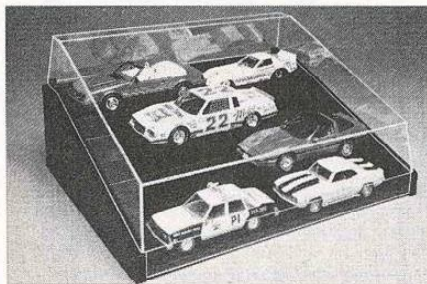
Quartermaster Corps, P. O. Box 908, Buckingham, PA 18912, has announced the release of five 1/32 toy soldier sets painted in gloss enamels: World War One, Bremen Infantry Regiment No. 75, \$55.00; WWI, Westpfalen Jager Battalion No. 7, \$55.00; Zulu War, British 24th Infantry Regiment, \$58.00; Sudan Campaign, British 25th Regiment, King's own Scottish Borderers, \$65.00; and Sudan Campaign, British 71st Regiment, Highland Light Infantry, \$65.00. Each set includes six pieces.

There are 12 new releases in the "Custom Characters" line from Rafm Company Inc., 19 Concession Street, Cambridge, ON, Canada N1R 2G6. Items available are No. CC-1, heroic adventurer; CC-2, warrior knight; CC-3, female fighter; CC-4, evil warlord; CC-5, barbarian warrior; CC-6, thief; CC-7, wizard; CC-8, sorceress; CC-9, priest; CC-10, elvish adventurer; CC-11, dwarf; and CC-12, half orc. Each sells for \$2.25.

Ral Partha Enterprises Inc., 5938 Carthage Court, Cincinnati, OH 45212, has released No. 01-501, bronze dragon of Pern, the first in a series of sculpted pieces based on Anne McCaffrey's *Dragonriders of Pern* series of books. It sells for \$30.00 and includes painting instructions. Ral Partha also is producing a series of boxed sets of 25 mm figures to be used with Runequest.

David Reed, 5451 East Creek Road, South Wales, NY 14139, is selling 1/48 and 1/72 Airwaves figures.

**Accessories and diorama materials.** New from Monogram Models, Inc., 8601 Waukegan Road, Morton Grove, IL 60053-2295, is



the car collector's display case, product No. 6033, molded in black plastic with a clear, removable cover. It is designed for 1/24, 1/25, and 1/32 automobiles and retails for \$12.00.

Poste Militaire has introduced figure bases of white metal and English yew in kit form. The foot base kit sells for £5.18 and the mounted base kit is £8.63. They are available from Historex Agents, 3 Castle Street, Dover, Kent CT16 1QJ, England.

Electronic kits and components for modelers are available from Power Resources, 1004 Madison Avenue, Pittsburgh, PA 15212.

S. A. E. Displays, 3804 Priest Lake Drive, Nashville, TN 37217, sells model display

Send  
S.A.S.E. for a  
FREE Price List

**LOW PRICES ON  
MILITARY MINIATURES**

-Brand Names-  
V.R. MPC, Series 77,  
Grenadier, Tamiya,  
Revel, Monogram,  
Tradition & More



The Quartermaster Company

226D W. 9th Street

Elmira Heights, N.Y. 14903



## TIRED OF WAITING? AIRCRAFT & ARMOR

**THE PLASTIC PLACE** features fully personalized service. We carry the newest releases, AND we also carry the "Old Standbys" that the discounters don't bother with. We stock the full line of Micro-Scale decals, as well as three lines of paint, and lots of accessories!

We are also the sole supplier for **THE PLASTIC PLACE CASE!** These beautiful clear display cases come with polished edges and a base for your prized model. Available in 10×12×5 for \$24.95, 12×15×5 for \$34.95, and 22×22×6 for \$49.95. Please add \$3.00 per case for shipping.



Our 60 page catalog is yours for \$2.00

**THE PLASTIC PLACE**

6321 S. Salina St. Nedrow, N.Y. 13120

Visa & MasterCard Welcome!

One of the largest selections of plastic kits in the state with over 2000 square feet of aircraft, cars, trucks, and military models.

Plus one of the largest selections of die cast vehicles anywhere.

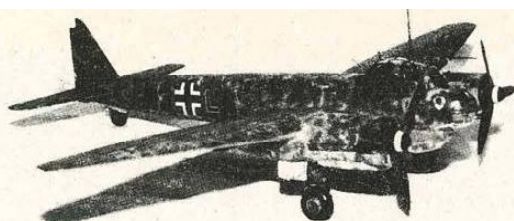
Open every night til 8 p.m.

Master Charge/Visa accepted.

"You'll love the prices, too!"

**HAROLD'S PLACE, INC.**  
522 Chestnut St., Lynn,  
MA 01904





Model: Jim DeLand

Koster  
1/48th Scale  
Junkers Ju 88

Photo: War Eagle

**WAR EAGLE**  
 INCORPORATED

Aircraft Armament &amp; Accessories

1/48th Scale Decals

# 4005 B - 57 Canberra ..... \$4.50



(Please Add 25¢ Postage &amp; Handling)

**WAR EAGLE**  
 TM
CHECK or MONEY ORDERS ONLY.  
ALL CONTINENTAL US orders  
shipped UPS POSTPAID.  
© 1984 War Eagle, Inc.
 carries KOSTER, GULL, DETAIL & SCALE, & BARE METAL. Illustrated Catalogue. \$2.50  
 offers completed REPLICAS - custom built to your specifications from available  
 INJECTION molded or VACUFORM kits (PLEASE SPECIFY WHEN INQUIRING)  
 DEALER INQUIRIES INVITED ON FALCON IND., GULL MODELS & WAR EAGLE  
 ALL CORRESPONDENCE SHOULD BE ADDRESSED TO THE ABOVE P.O. BOX

 P.O. Box 255  
 New Baltimore, Michigan 48047  
 (313) 725-7345

## NOW AVAILABLE

## GULL MODELS VACUFORM

(1/48th Scale - Includes Decals &amp; Cast Parts)

Macchi M.C. 202 ..... \$17.95

Dewoitine D. 520 ..... \$17.95

(Dealer Inquiries Invited)

## COMING SOON

## GULL MODELS VACUFORM

(1/48th Scale - Includes Decals &amp; Cast Parts)

KUGISHO D4Y1 SUISEI 11

(Inline Engine *Judy*)

KUGISHO D4Y4 SUISEI 43

(Radial Engine *Judy*)

JN(THRICK) Resin Kits (1/48)

(Claude, P-35A, Babs, Judy)

(PLEASE WRITE FOR INFORMATION ON THESE KITS)


 cases with a wood base and an acrylic cover.  
 Assembly of the cover is required. Sizes  
 available include 6" square to 24" square,  
 4" x 8", 5" x 10", and 6" x 12"; custom sizes  
 are available on request. Prices range from  
 \$6.95 to \$39.95, plus postage. Specific infor-  
 mation is included in S. A. E.'s catalog and  
 price sheet.

**Tools.** F & H Machinery Co., P. O. Box  
 48056, Chicago, IL 60648, is selling the  
 Scangrind 150 wet stone which features a 6"  
 stone. It turns at 200 rpm.

 Jarmac, Inc., P. O. Box 2785, Springfield,  
 IL 62708, has introduced a deluxe 4" bench-  
 top table saw, model No. 1010SG. This  
 metal saw is designed to cut small wood,  
 plastic, Styrofoam, and nonferrous metal  
 parts, and comes with a 1/15 horsepower  
 motor, miter guide, rip fence, and fine tooth  
 saw blade with 200 teeth. The table top is  
 9" x 12". Blade height can be adjusted to 5/8"  
 and tilts to any angle up to 45°. The  
 benchtop table saw sells for \$136.50 plus  
 \$4.50 shipping.

 New from Loew-Cornell, Inc., 563 Chest-  
 nut Avenue, Teaneck, NJ 07666-2490, is the  
 Mixtique line of paintbrushes. These brush-  
 es are a mixture of pure Golden Taklon syn-  
 thetic fibers and natural hairs; two lengths  
 are available.

 Merit Abrasive Products, Inc., 201 West  
 Manville, P. O. Box 5447, Compton, CA  
 90224, has announced the release of the new  
 lightweight Sand-O-Flex, a brush-backed  
 sander, \$15.95. It has a high-impact plastic  
 body and uses cloth-backed aluminum oxide  
 abrasive.

**Catalogs.** A free 56-page catalog of books  
 and videotapes is available from Aviation  
 Book Company, 1640 Victory Boulevard,  
 Glendale, CA 91201. Outside the U. S., send  
 \$2.00 for postage.

 Send \$2.00 to Arthur S. Green, 485 South  
 Robertson Boulevard, Beverly Hills, CA  
 90211, for his Metals for Casting Models  
 catalog.

 Jane's Publishing, Inc., 286 Congress  
 Street, Boston, MA 02210, has released a  
 26-page fall/winter 1984 book catalog.

 For a catalog listing New Era Metal Mod-  
 els' painted model soldiers, unpainted cast-  
 ings, and arm band decals and other acces-  
 sories, send \$2.00 to 1612 NW 55th Place,  
 Gainesville, FL 32606.

 NorthWest Short Line, Box 423, Seattle,  
 WA 98111, has released its 1984 catalog.  
 The price is \$3.00.

 J. Peddinghaus, Beethovenstrasse 20, 5870  
 Hemer, West Germany, produces a line of  
 1/32 figures. A catalog is available for  
 DM10 (Deutsche Marks).

 Smithsonian Institution Press, P. O. Box  
 1579, Washington, DC 20013, has published  
 a free 64-page fall/winter 1984 book catalog.
CLIMB ABOARD THE GREAT NEW  
SHIP MODELING MAGAZINE...

# Ships in Scale

BARGAIN  
INTRODUCTORY  
RATE
**NO RISK GUARANTEE:** If not com-  
 pletely satisfied with your first issue,  
 you may cancel your subscription and  
 we'll refund your entire purchase price.

**MODEL EXPO  
 PUBLICATIONS, INC.**

 23 Just Road  
 Fairfield, NJ 07007

 If you've ever built a model ship before—or  
 even *thought* about building one—this magazine is  
 for you! *Ships in Scale* is the magazine for hobbyists, would-be  
 hobbyists, or just those who love to putter about, dream about,  
 or read about ships. *Ships in Scale* covers every aspect of ship  
 modeling—power and sail, plastic and wood, scratch building  
 and kit, even radio control. You'll find detailed articles, pages  
 of plans, fantastic photographs, historic—and nostalgic—  
 journeys into the past, plus news and notes of nautical events.

 Subscribe now and save \$3 off the newsstand price.  
 Enjoy one full year (6 issues) for just \$15.

MAIL THIS COUPON TODAY!

**YES!** Please enter my subscrip-  
 tion to SHIPS IN SCALE for the  
 period checked.

- ☐ 1 YEAR (6 issues) \$15. (Regular  
 newsstand price is \$18/year!)
- ☐ 2 YEARS (12 issues) \$28. (Lock  
 in bigger savings for 2 full  
 years!)

☐ My check or money order is  
 enclosed.

**MODEL EXPO  
 PUBLICATIONS, INC.**

23 Just Road, Fairfield, NJ 07007

☐ Charge my credit card.

☐ Visa

☐ MasterCard

☐ American Express

Card No. \_\_\_\_\_

Exp. Date \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

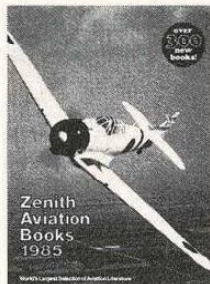
State \_\_\_\_\_

Zip \_\_\_\_\_

Please allow up to 8 weeks for delivery of your first issue.







The 1985 catalog from Zenith Aviation Books, P. O. Box 2, Osceola, WI 54020, is now available. This free catalog lists more than 1,500 titles.

**Miscellaneous.** An 18" x 30" print of the P-51B Mustang "Ding Hao" is available for \$65.00 plus \$5.00 for shipping and handling from Aero Graphics, P. O. Box 28583, Atlanta, GA 30328. The print is signed by the artist, John Ficklen, and the airplane's pilot, Jim Howard.

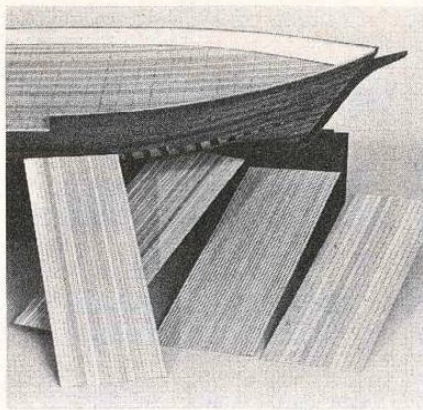
The Armchair Sailor Bookstore, Lee's Wharf, Newport, RI 02840, has published a 24-page supplement to its *Descriptive Bibliography of Current Marine Titles*. It's priced at \$2.00, or \$5.00 for overseas air-mail.

New from Densa Fine Arts, 536 Morse Avenue, Schaumburg, IL 60193-4563, are 16" x 20" prints of the M60A1 and M1 Abrams tanks. Each print is signed by artist Robert Coffman.

Esselte Pendaflex Corporation, Clinton Road, Garden City, NY 11530, has added the Dymo DeLuxe I. D. Labelmaker to its line. Suggested list price is \$6.60; Dymo tape rolls sell for \$1.89 each.

A booklet entitled *Drawings for Photo-Etching* is available for \$4.00 (refundable with a \$30.00 purchase) from Fotocut, Box 120, Erieville, NY 13061. It includes a sample drawing, negative, and etching.

IPMS Tracks and Props Chapter, 507 Donovan Avenue, Bellingham, WA 98225, is selling a pamphlet which lists WWII aircraft colors matched to FS 595a. The price is \$2.00.



Northeastern Scale Models, Inc., P. O. Box 425, Methuen, MA 01844, has introduced a line of miniature scale ship decking in hardwood tones with fine black lines representing caulking between the boards. The .050"-thick laminated sheets measure 3" wide by 22" long; spacing is offered in 1/16", 3/32", 1/8", and 3/16".

Subscriptions to *Koku-Fan* (12 issues, \$75.00), *Koku-Fan Illustrated* (6 issues, \$90.00), *Famous Airplanes of the World* (6 issues, \$25.00), and *Combat* (\$12 issues, \$75.00) may be purchased from Photo Press International, Ltd., P. O. Box 2477, Alexandria, VA 22301.

The 1985 aviation art appointment calendar from Squadron/Signal Publications, 1115 Crowley Drive, Carrollton, TX 75011-5010, sells for \$5.95.

**Industry news.** Twentieth Century Imports, 4732 East Pearl, P. O. Drawer 3348, Boulder, CO 80303, has announced that it has been hired by the Testor Corporation, 620 Buckbee Street, Rockford, IL 61108, as a consultant on Testor's new line of Japanese science-fiction model kits. Testor already has begun marketing 13 kits from the Gunze Sangyo line.

**Coming events.** The North Eastern Model Car Meet will be held October 7 at the VFW Hall, 513 Veterans Place, Hasbrouck

Heights, New Jersey. Admission is \$2.50 for adults and \$1.00 for children under 12.

The Delaware Valley Scale Modelers will host the IPMS Region II convention October 12-14 at Halloran Plaza, Pennsauken, New Jersey. For additional information, write to Paul L. Viens, 217 Barnsbury Road, Langhorne, PA 19047.

Modelfest '84, a scale model contest and exhibition sponsored by the Austin Scale Modelers Society, will be held October 27 in Building 41 of Camp Mabry, West 38th Street and Mo-Pac Expressway, Austin, Texas. Contest entry fees are \$2.00 per model for senior category members and \$1.00 per model for those in the junior category. Admission is free. For more information, call Bob Bethea, (512) 327-4304, or Tom Eisenhour, (512) 442-4800.

The Fifth Annual Northwest Figure Competition and Show, sponsored by the Military Figure Collectors of Oregon, will be held November 3 at the Jackson Armory on the Portland (Oregon) Airbase. Hours are 10 a.m. until 5 p.m. More information is available from Northwest 84, 10608 NE Tillamook Street, Portland, OR 97220.

The 22nd annual exhibit sponsored by the National Capital Military Collectors will be held from 10 a.m. until 5 p.m. on November 3 at the Tysons Westpark Hotel, 8401 Westpark Drive, McLean, Virginia. Admission is \$3.00; children under 12 will be admitted for \$1.00. Complete information can be obtained from Dick Perry, 6433 Deepford Street, Springfield, VA 22150.

Modelers in England should note that the 54th Model Engineer Exhibition will be held December 31-January 6 at the Wembley Conference Centre. Models must be entered by October 19. Entry forms and rules of the competitions are available from the Exhibition Manager, Model Engineer Exhibition, Park View House, Park View Road, Berkhamsted, Herts. HP4 3EY, England.

The Indianapolis Adam's Mark Hotel will be the site of the 1985 IPMS national convention, July 18-21. For more information write to IPMS Indianapolis, 1985 National Convention, P. O. Box 88295, Indianapolis, IN 46208. **FSM**

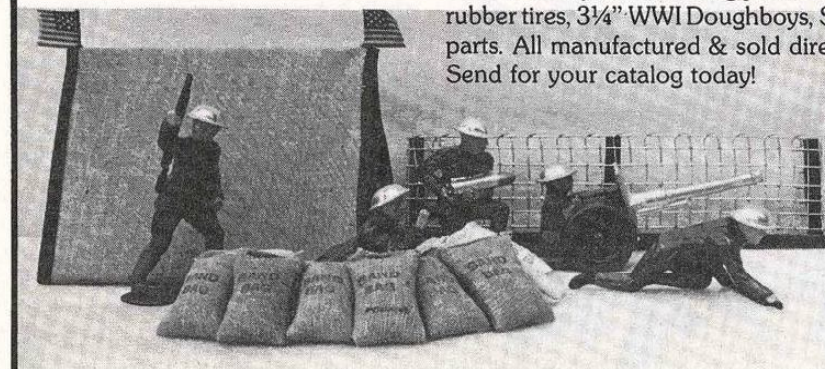
## 1930's DIMESTORE Vehicles & Soldiers

MANUFACTURED FROM  
ORIGINAL MOLDS

HOLLOW CAST IN A SPECIAL  
WHITE METAL LEAD ALLOY



Now, the American Dimestore Figures that were so popular years ago are once again available for your collecting pleasure. A full line of Vintage Autos & Trucks with white rubber tires, 3 1/4" WWI Doughboys, Santas, Ice Skaters & Skiers, repair & replacement parts. All manufactured & sold direct to Modelers & Collectors. Send for your catalog today!



FSM

### VINTAGE CASTINGS, INC.

127 - 74th Street North Bergen, N.J. 07047  
(201) 861-2979

Enclosed is \$1.00, please send me the NEW 10 pg. Vintage Castings' 1983 Dimestore Catalog by First Class Mail.

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_



## COLLECT TOY SOLDIERS

Subscribe to



### Toy Soldier Review

The worldwide magazine for toy soldier collectors. Discover why thousands have found toy soldier collecting to be a thoroughly fascinating hobby.

\*\$12.00 1 Year Subscription (4 Issues) \*\$3.00 Sample Issue NAME \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_

STATE, ZIP \_\_\_\_\_

VINTAGE CASTINGS, INC.

127-74th St., North Bergen, NJ 07047 • (201) 861-2979

Plastics Plastics Plastics

## SCALE MODELS LTD.

1048 EAST 162ND ST. (RT. 6)  
SOUTH HOLLAND, ILLINOIS 60473

Catalog and  
six bimonthly updates  
\$3.00 (Refundable)

VISA MC AMEX ACCEPTED

## FSM READER FORUM

Let us know what you think! Comments, suggestions, corrections, and additional information on FSM articles are welcome in this column. Letters submitted for publication should be clearly marked "To the Editor" on both the envelope and the letter, should be typed or hand-printed, and should be no more than 300 words long.

**Those vehement reviews.** Concerning Loren Perry's comments in the July/August FSM, I do not agree that reviews should be softened up just to ensure we do not offend the manufacturers. If they put out a kit that should have been supplied with a tube of green stuff to fill the gaps, or if the parts are warped, or if someone forgot to close the mold and there is flash all over the place, then the company should hear about it. I'm not sure how Mr. Perry earns his living, but I know that when I make a mistake at my job, I have to bear the heat from irate customers. Errors are not what people pay for, and parts are supposed to fit.

Model manufacturers have an advantage over the modeling public — we have to pay our money first and *then* find out how well a kit fits together. I do not know of a store that will let you cut the parts loose to test fit them; the best you can do is a visual inspection. If something is warped or has poor detail you have the option of not buying the kit, but you really don't know until the cement starts to flow. The model manufacturer has implied by producing the kit that parts fit, and this is what my hard earned money goes for.

Any time this isn't true, I feel ripped off and woe be unto the company that got my bucks. I don't want to hear that their QA system dropped the ball and missed one kit out of 1,000,000. I didn't buy those other kits, I bought the turkey and I'm upset that I can't put the thing together properly. I don't want to wait around for the manufacturer to send me one of those other 999,999 good kits, because I bought the kit so I could assemble it *now*. So I try to weed out the poor kits by reading publications like FSM and IPMS Update.

Just because models were somewhat less refined in 1950 (yes Loren, I remember also), I don't judge today's kits against 30-year-old products.

Kenneth Rumbaugh  
Burlingame, Calif.

I seldom respond to a letter or an article in a magazine, but I'm compelled to comment on Loren Perry's letter in July/August FSM.

First, I have been building models for over 30 years and quite agree with Mr. Perry's assessment that sometimes your workbench reviews are too vehement. I subscribe to this magazine and others because one never stops learning new and different techniques regarding this hobby, and because I like and enjoy most of it.

I have a Revell B-1B still in the box, so I don't know if mine has warped or poorly fitting parts, but that is not important. I have dealt with warpage, poor fit, inaccuracies, and other defects in kits from all manufacturers before, and will again. Coping with problems of this sort is not only educational,

## HOBBY SPRAY BOOTHS



- AIR FLOW DESIGNED FOR AIR BRUSHES
- BUILT IN LIGHT SOCKETS (BULBS NOT INCLUDED)
- BECOMES A CURING OVEN BY ATTACHING FRONT COVER (INCLUDED WITH BOOTH)
- EXHAUST OUTLET SIZED FOR 4" DRYER VENT TUBE

# SL 2 23x12x11 89.95

DISPLAY SHELVES  
(W/2 1/2" HARDWOOD SHELF)

## DISPLAY CASE KITS

- 1/4" CLEAR ACRYLIC CASE PIECES - CUT TO SIZE FOR EASY ASSEMBLY
- FOR SMALL DIARAMA SCENES
- USED TO DISPLAY MODEL CARS, TRAINS, MINIATURES, SMALL SHIPS & PLANES

VALUE PRICING  
1.75 - 10.95

DISPLAY BASES  
(MOLDED ABS)

**AW**  
INDUSTRIES

290 NORTH BENSON AVENUE, UPLAND, CALIFORNIA 91786 (714) 946-1728

## Small Wonders

Nothing beats the detail or quality of BlueJacket model ship fittings.

Scale is absolutely true.

Proportions are accurate.

Detail is superb.

We use only the finest materials: Brass for machined parts and non-corrosive britannia for casting—never plastic, lead or white metal.

Centrifugal casting assures the cleanest detail in even the most minute pieces.

Over 1,000 different patterns, with scales ranging from 1/16" = 1' (1:200) up to 1/2" = 1' (1:24) are available covering nautical history from sail through power.

Find out why BlueJacket model ship fittings have been the favorites of discriminating model builders since 1905. Send \$2.00 for catalog of fittings, kits, and supplies.



**BLUEJACKET**  
SHIPCRAFTERS

AMERICA'S OLDEST MODEL MAKERS

P.O. Box 533-FSM, Shelton, CT 06484





it is necessary, and a "shake-the-box" kit teaches no one anything. The thrust of FSM, or any other magazine, should be directed towards younger and less experienced modelers. Articles written by experts, for experts disenfranchise the most important people in our hobby, those just getting started.

When a less-than-perfect kit is reviewed, its defects should be mentioned, but, just as important, tell me and others what you did to correct those defects! We've all been confronted with what appeared to be unrelated, twisted globs of plastic and made a decent model from them—even when the only straight pieces were sprue!

For example, I have read that the Micro-scale system will not work on Monogram's

new decals. Okay, modify the system—do something that *will* work. In building an MPC 1/72 "Dog" Saber I used a hodgepodge of decals, including some from Monogram's B-1B which I assume are of the new type. Instead of using Microscale products, which are not available to me except by mail order, I soaked the decals in water in which a little white glue had been dissolved, then, after the decals had been placed, painted them with denatured alcohol solvent. The application of the alcohol made them lie right down without problems. After drying 24 hours the decals were overpainted with Hyplar gloss varnish. Using this system, I had no problems.

Bruce Lindgren  
Beloit, Wis.

VP	TRY THESE !!
CANADA	1/72 vacuforms
	EXCELLENT QUALITY !!
Aero A-300 late '30s Czech twin engine bomber	8.95
Avro Canada Arrow 1958 Mach 2 delta wing	12.95
Bereznyak-Isaev BI WWII Soviet rocket fighter	3.95
R-5 1928 Russian bomber biplane	6.95
Bloma & Voss BV-40 WWII German glider fighter	3.95
Avia BH-21 1925 Czech biplane fighter	5.35
Polish Injection Molded 1/72 scale	
Mikro LWS Czaplja reconnaissance monoplane	4.45
PZW IS-1 Sep Bis Polish Sailplane-Decals, bagged	3.95
PZW Mucha Standard Polish Sailplane-Decals, bagged	3.95
Mikro PZL 37A/B Los Polish WWII bomber	11.95
Send for newsletter. DEALER ENQUIRIES INVITED. Payment in US \$. POSTFREE. VICTORIA PRODUCTS, DEPT. F, 930 Foul Bay Road, Victoria, B.C., Canada, V8S 4H9	

Please mention FINE SCALE MODELER  
when writing to advertisers

## The Parts Department

A DIVISION OF MCKEAN MODELS



### Now that we've got your attention...

Please notice that Teresa is holding a piece of treadplate. That's the stuff that is used for van and pickup running boards and bumpers, as decks on race-car haulers, and just all over 18-wheelers and firetrucks.

The Parts Department of McKean Models has carefully scaled this prototype into

1/25 scale, injection-molded, .040" styrene sheet. Now, no more do-it-yourself with a hot knife; no more cannibalizing kits! It can also be used in 1/24, and if you're not too picky, in 1/32 and on 1/35 armor.

Two sheets, 4"x7.75" (about 8'x16' in scale) for \$3.98. Try your local hobby shop, or mail direct to McKean Models, 707 E. 41st #236, Sioux Falls, SD 57105. Include \$.75 for postage and handling.

**FACT, FICTION & FANTASY  
MAIL ORDER — OUR SPECIALTY  
MINIATURE FIGURES**

Collector  
Castings  
**ENSIGN  
Miniatures**  
**Now In  
Stock**  
54mm Scale  
**\$5.95**  
Each  
(+ \$1.50  
Shipping  
Per Order)  
Wis. Residents  
Add 5% Tax)

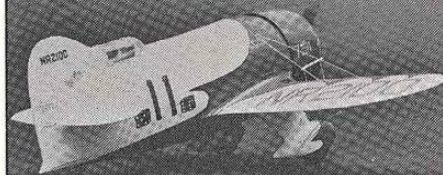
JG24, Pvt. 7th N.Y.  
National Guard USA 1861

JG25, General of  
Cavalry CSA 1861

**Send \$5 For Full Illustrated Catalog**  
(\$6 Outside Continental U.S.)  
190+ Pages - In-Stock Items Pictured - Periodic Updates

**Cush** 6525 W. Bluemound  
Milwaukee, WI 53213  
Hours By Appointment (414) 258-6006

## AIR RACERS!

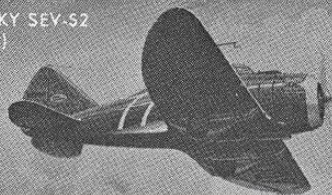


GEE BEE R-1



CAUDRON 460

SEVERSKY SEV-S2  
(or P-35)



GEE BEE Z

1/32 scale plastic model kits of Golden Age air racers! Colorful, highly detailed miniatures. Send \$1 for fully illustrated catalog of these and other kits and accessories.



DEPT. FS  
181 PAWNEE ST.  
SAN MARCOS,  
CALIFORNIA 92069



WEDDELL-WILLIAMS

## FineScale MODELER

## LISTS

From time to time, FINESCALE MODELER Magazine makes its subscriber list available to reputable companies and organizations that wish to provide our readers with flyers, catalogs, or other material of interest. All mailings are evaluated by FINESCALE MODELER to ensure the integrity and suitability of the material. Our policy forbids telephone or other direct solicitation by these firms, but does release your FINESCALE MODELER mailing label to them for their one-time use.

If you would prefer not to receive these mailings, please send us a recent mailing label from the envelope your magazine arrives in, or copy the label exactly as it appears. Please send the label with a brief note directing us not to make your name available, and we will exclude your name from these mailing lists.



**FLEX-I-FILE™****MAKES  
MODELLING EASIER**

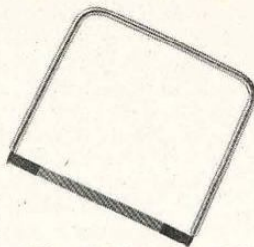
Here's a versatile new hobby tool for clean-up and finish preparation of plastic, wood and metal models. Easy-to-handle frame with tough abrasive tapes allows you to reach into tight corners, erase parting lines, smooth joints and blend contours with precise control.

S-700 STARTER SET: One frame and 6 assorted tapes — \$3.98  
TAPE REFILLS: Pkgs. of 6; Fine, Medium or Coarse — \$1.00 ea.

At your local dealers, or order direct. Postpaid in U.S. and Canada; others add \$1.00.

**CREATIONS UNLIMITED**

2939 Montreat Dr. N.E. Dept. F  
Grand Rapids, Michigan 49505



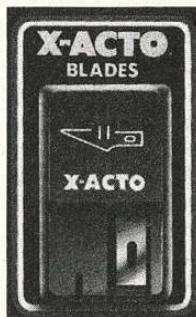
# IF YOU THINK YOU CAN CUT CORNERS WITH AN OLD BLADE, PUT IT TO THE TEST.

Because your work demands tools of exacting and delicate precision, we make X-ACTO® knife blades both sharp and precise. But because our blades can't keep their accuracy forever, we also make them easily replaceable.

## THE X-ACTO TEST

A sharp X-ACTO blade will maneuver smoothly along the curves and corners of this dotted line, making the kind of clean cut you expect in your work. If, however, your blade drags, shreds, slips or catches somewhere along the line, then it's no longer giving you the precision your work demands. In which case, it's time to replace your X-Acto blade with a fresh one.

When used properly, your X-Acto knife will become indispensable. But when used frequently, remember that the blade is disposable.



**X-ACTO®**  
CRAFT KNIFE BLADES

Put new life  
in your X-ACTO knife.

X-ACTO

©1984 Hunt/X-ACTO Inc. Div. Hunt Mfg. Co.  
1405 Locust St., Philadelphia, PA 19102

**Figure realism revisited.** I would like to comment regarding John Henry Sain's letter in September/October Reader Forum. Since the inception of collector or "connoisseur" figures, the trend in painting has been toward the artistic or painterly approach, which boils down to an enhancement of three-dimensional form through the use of highlight and shadow. This technique gives the figure a vitality (albeit an artificial one) that is lacking in a flatly painted piece.

Most of us have had the experience of seeing a figure which seems to "leap out" at us from among a group of other models — you can be several feet away and the boldness of its form practically compels you to take a closer look. It is this "gotcha" factor that the modelers Mr. Sain calls "they" are after.

It is interesting that Mr. Sain questions the validity of this technique in respect to armor models. Shep Paine began toying with this idea many years ago, and Francois Verlinden has based his considerable reputation on his ability to translate this painting style to all aspects of diorama building. Verlinden's influence has created a popular fashion among armor modelers, and it is one I subscribed to for many years in my own work.

However, not long ago I began to ask similar questions in regard to realism. This kind of painting can make an eye-catching model, but too much emphasis on it can lead to an artificial or antiseptic look. The surface effects of dirt and grime begin to get lost in the scramble to achieve a three-dimensional illusion. The answer to this problem can be illustrated by the analogy of a painter faced with the problem of rendering a giraffe. Does he concentrate on getting the surface skin pattern (read "surface weathering effects") or the basic form (read "highlight and shadow") of the animal?

The answer, of course, is that he does both. Anybody who goes to a model contest soon realizes that the lighting of your model is beyond your control. However, with a bit of thought, "light" can be painted into your models without sacrificing realism.

I realize this letter is longer than your requirements, but Mr. Sain's letter really struck a chord in me. This is a problem I had been wrestling with for some time, and it took a few more words to get my point across.

Mike Good  
San Diego, Calif.

I concur with John Henry Sain's "minority opinion on figure realism." The colors on figures seem far too exaggerated. Historical research tells us that neither the chemistry nor the technology existed to produce massive amounts of cloth in consistent colors for an army's needs. The best and brightest cloth and colors were purchased by the rich, the second best and the dull colors went to the middle class, the poor and the military received what was left. Personal hygiene was almost nonexistent — and as any veteran will attest, when out in the field you get filthy.

James W. Birchfield  
Camp Hill, Ala.

**Improvements for FSM.** I have been a reader of FSM since its first issue, and find it among the best in its field. This said, some improvements could be made.



I'm one of those "average" modelers who make up the vast majority of your magazine's readers. I build models of many different subjects — AFVs, ships, aircraft (both civil and military), motorcycles, and "Big Rigs," and in scales from 1/720 to 1/9. My talents are average, and I read your magazine to improve my techniques. I am not a superdetailer or conversion expert. Most of my attempts in the fields of detailing or conversion consist of relatively simple exercises to improve on a basic kit. The superdetailers and converters write your articles. They rarely read them, or so I believe.

This said, I'll dissect your typical FSM. First the kit reviews: To me this is one of the most important sections of any modeling magazine. Most kits are purchased with the intention of building a realistic scale replica. Most modelers build the kit "stock," and most of those who don't content themselves with adding small details to make up for deficiencies in the kit. A good kit review should therefore consist of a brief description of the subject of the kit and a good account of the accuracy of the moldings, de-

scribing the pros and cons of the various parts. Because few modelers have the data available or the experience to critique a kit absolutely objectively, pointing out its strong points and its weak points, it's more helpful in a review to compare the kit to similar ones by other firms.

Next the construction of the kit should be carefully described. Most important, problems in construction and painting must be pointed out, and ways of avoiding these given. Ways of improving imperfect aspects of the kit should be mentioned so the finished product can be as accurate as possible. Large models such as Revell's 1/32 F-15E (FSM Fall 1983) or ESCI's 1/9 Kettenrad cannot be adequately covered in small reviews, but instead should have feature-length articles written on them, providing a detailed kit review as well as in-depth details on the various painting and decaling schemes.

FSM Book Briefs falls down badly because of its attempt to review too many books in each issue. Rather than reviewing 14 titles (FSM Fall '83) or 24 (Jan/Feb '84),

surely it would be better to confine oneself to reviewing far fewer titles but in greater detail. (If a publisher wants his products publicized, let him take out an advertisement.) Books after all have become very expensive, even softbound editions, and one has to be very particular when considering additions to one's library. A good review would examine the contents of the title, describing what the book covers, how well it covers it, and the deficiencies of the publication. An important question to be answered in every book review is "does this title represent value for money compared with similar titles on the market?"

Finally, feature articles. Overall FSM has done a fairly proficient job here, with a good mixture of conversion and how-to-do-it articles. Such articles should, I feel, be moderately yet simply detailed in text, and most importantly the steps described in the text must be supplemented by good, accurate diagrams, and photographs.

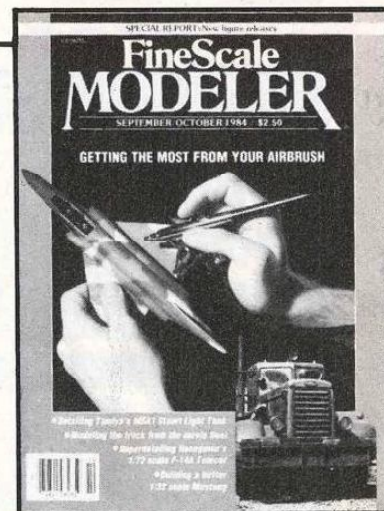
A. C. Birkbeck  
Seattle, Wash.  
FSM

# Ask for — and give — FSM!

**FineScale  
MODELER**

## It's the year long gift!

A subscription to FINESCALE MODELER is a gift that will be enjoyed and remembered all year long. Six times a year, FSM includes new scale modeling tips and techniques, offers reviews of the latest hobby products, provides challenging how-to-do-it projects, and brings you a wealth of accurate research data. If someone close to you is wondering what to give you this Christmas, ask for America's quality scale modeling magazine—FINESCALE MODELER! And let FSM solve your gift-giving problems, too! Give FSM to scale modelers you know. Purchase more than one subscription and take advantage of our money-saving offer! We'll send a gift card bearing your name and announcing the length of the subscription. And here's more good news—right now you can also enter the FINESCALE MODELER Sweepstakes! To give one or more gift subscriptions and enter the Sweepstakes,\* follow these instructions: Fill out the coupon below for your gift subscriptions and then locate the Sweepstakes Entry Form (you'll find it between pages 66-67). On the left-hand portion of the Sweepstakes Entry Form, fill out your name, address, and phone number. Then return the gift coupon and the Sweepstakes Entry Form in an envelope. That's all there is to it!



\* You need not subscribe to enter the Sweepstakes. Refer to the Official Sweepstakes Rules on page 67 for complete details.

DEPT. 3365, FINESCALE MODELER, 1027 N. Seventh St., Milwaukee, WI 53233

### YOUR FIRST SUBSCRIPTION

The first subscription (for yourself or as a gift) costs **\$12.50** (outside the U. S., \$15.50) for one year, entitling you to give other subscriptions at a discount.

Enter a ☐ **new** ☐ **renewal** one-year subscription beginning with the \_\_\_\_\_ issue.

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State, Zip \_\_\_\_\_

### YOUR ADDITIONAL SUBSCRIPTIONS

The gift subscriptions you give cost only **\$10.95** (outside the U. S., \$13.95) for one year after buying the first subscription at the regular price.

Enter a ☐ **new** ☐ **renewal** one-year gift subscription starting with the \_\_\_\_\_ issue for:

Name \_\_\_\_\_

Street \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Enter a ☐ **new** ☐ **renewal** one-year gift subscription starting with the \_\_\_\_\_ issue for:

Name \_\_\_\_\_

Street \_\_\_\_\_

City, State, Zip \_\_\_\_\_

### HOW TO PAY

(OUTSIDE THE U.S.)

First one-year subscription **\$12.50** U. S., \$15.50

Additional gift subscriptions

@ **\$10.95** each

(outside the U. S., \$13.95)

Gift card should be signed from: **TOTAL** \_\_\_\_\_

(Please print and include full address.)

Name \_\_\_\_\_

Street \_\_\_\_\_

City, State, Zip \_\_\_\_\_

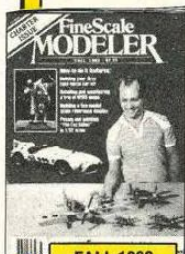
Charge to: ☐ **MasterCard** ☐ **VISA** **EXP. DATE** \_\_\_\_\_

**CARD NUMBER** \_\_\_\_\_

**SIGNATURE** \_\_\_\_\_



# Discover challenging modelbuilding projects — and useful scale modeling tips — in these FSM back issues!



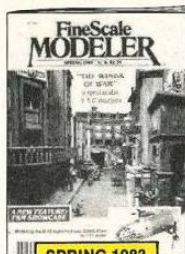
**FALL 1982**

Build a cast-metal car kit  
Detailing WWII jeeps  
Five-model display  
1/32 "The Fez Seller"  
Weathering trucks  
1/48 Supermarine Walrus



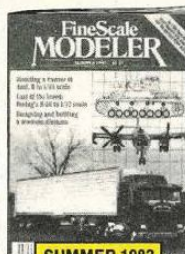
**WINTER 1982**

1/35 Soviet T-60 tank  
Acrylic display cases  
Race car cockpits  
Mountain man figure  
Build your first diorama  
Spitfire Mk. IA P9306 data



**SPRING 1983**

4' x 8' 1/35 diorama  
1/72 B-29 Superfortress  
Camouflage netting  
Modeling four Tigercats  
StarClipper spacecraft  
Realistic lights/lenses



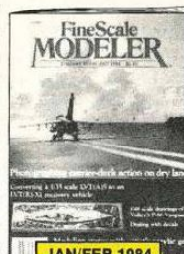
**SUMMER 1983**

The perfect filler putty  
1/35 Panzer IV Ausf. B  
Attack lizard!  
1/18 museum diorama  
Aerodyne cab-over  
1/72 Boeing B-50



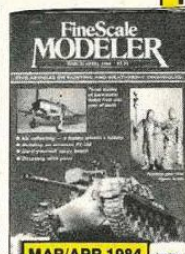
**FALL 1983**

M48A3 moving pillbox  
Testors F-4E Phantom II  
Aircraft cockpit details  
1/25 scratchbuilt truck  
Superdetailing armor  
Solve casting problems



**JAN/FEB 1984**

Vultee P-66 in paper  
Water with acrylic gel  
1/35 LVT(R)-X1  
Dealing with decals  
Realistic model shots  
Precision modeling tools



**MAR/APR 1984**

Detailing with paint  
Paint your first figure  
Accurate PT-109  
Build a spray booth  
Kit collecting  
Bare-metal finishing

**DEPT. 38654, FINESCALE MODELER, 1027 N. Seventh St., Milwaukee, WI 53233**

Enclosed is my payment of \$\_\_\_\_\_ for the FSM back copies I've marked below at \$2.25 each. Add \$1 per order for postage and handling. Wisconsin residents add 5 per cent sales tax. Back copies available only in U. S.

☐ **FALL 1982**

☐ **WINTER 1982**

☐ **SPRING 1983**

☐ **SUMMER 1983**

☐ **FALL 1983**

☐ **JAN/FEB 1984**

☐ **MAR/APR 1984**

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State, Zip \_\_\_\_\_

Charge to: ☐ **MASTERCARD**

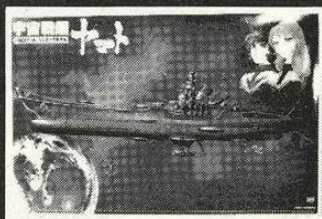
☐ **VISA**

Exp. Date \_\_\_\_\_

Card Number \_\_\_\_\_

Signature \_\_\_\_\_

If you don't wish to clip your magazine, copy the necessary information including department number on a separate sheet. Prices subject to change. © KALMBACH PUBLISHING CO.



# HORIZON

**Hobbies & Toys Distribution  
428 BOYD ST. LOS ANGELES, CA 90013**

**We import complete selection of Japanese Science Fiction  
Plastic Models and Diecast Toys.**

**Please call Dealers Information to HORIZON: (213) 687-0853.**



Every FSM Workbench Review is a first-hand report by a modeler who has actually built the kit or used the product. While our reviewers are encouraged to compare the products to similar ones in their experience, evaluation is of secondary importance; the reviewer's primary goal is to provide a detailed description of the product so FSM readers can evaluate it for themselves. Models shown in Workbench Reviews are built straight from the box.

**Kit:** No. A601, F-16 Cockpit

**Scale:** 1/12

**Manufacturer:** ESCI, Italy, distributed by International Hobby Corp., 350 East Tioga St., Philadelphia, PA 19134

**Price:** \$14.98.

**FRUSTRATED FIGHTER JOCKS** like me occasionally look at our models and dream of sitting in the cockpit of a full-size jet fighter, revving up that powerful turbine, giving a thumbs up to the crew chief, taxiing out to the runway, and punching a hole in the clouds with a max-performance takeoff. Well, most of us won't ever get that chance, but now we can dream in a bigger scale. ESCI's first cockpit (an F-104 cockpit is next) contains 113 parts molded in light gray and tinted clear styrene. Also included are a black plastic display stand and adhesive-backed fabric seat belts.

The instructions label the parts with numbers and a letter code indicates the colors that should be applied. They also show diagrams of the finished panels and consoles, calling out (in English) the function of most dials and panel sections. The well-printed decals include main instrument faces, display screens, warning placards, and markings for the pilot's helmet. To make them easier to locate, the decals are arranged in assembly groups on the sheet (seat, main panel, left console, and so forth).



All photos, FINESCALE MODELER: A. L. Schmidt or Paul A. Erier unless otherwise credited.

The kit contains a highly detailed ACES II ejection seat, instrument panel, consoles, cockpit floor including rudder pedals, head-up display, side stick and throttle lever, and pilot's helmet with oxygen mask. The tinted clear parts include display screen lenses, head-up display lens, angled gunsight glass, and helmet visor.

There were no major assembly problems, but the seat back cushion (part No. 13) doesn't fit against the seat back. Although the real seat back cushion is flexible, the plastic part is not, and it awkwardly stands away from the seat at its top. Perhaps warming the cushion in hot water and bending it into shape would be the solution here.

The seat belts are printed on an adhesive-backed fabric, but I thought the brown was too bright; I applied a thin coat of Tamiya XF-59 Desert Yellow to tone them down. The instructions clearly show how the belts are laced through the buckles and attached to the cushions. The stiff fabric made it necessary to super glue the finished belt assem-

blies to the cushions to keep them from floating in midair.

Decal 3H (oxygen regulator dial) is printed in black and goes on a black panel on the right console, making it invisible. Otherwise the instruments, knobs, switches, and levers are accurately reproduced compared with interior photos in Bert Kinzey's *F-16 in Detail and Scale*. There could have been more markings, especially for the ejection handle, stores release button, and other emergency systems. The finished model is 6" long, 4" wide, and 4" high.

I spent 30 hours on my model. Although assembly was simple, beginning modelers may have trouble handling the small knobs (the smallest are 1.5 mm in diameter) which would be lost forever if dropped on a shag carpet. The complex painting of the molded-in details is the biggest chore, but experienced modelers with steady hands should find this kit an enjoyable change of pace. Now, where's the rest of the airplane?

Paul Boyer

**Kit:** B. A. C./Martin B-57 Canberra

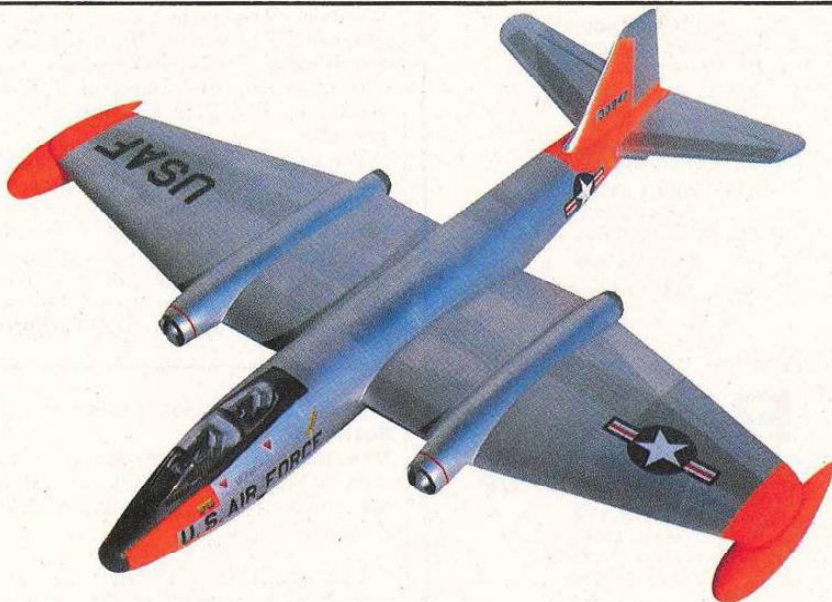
**Scale:** 1/48

**Manufacturer:** Falcon, New Zealand, distributed by War Eagle Inc., P. O. Box 255, New Baltimore, MI 48047

**Price:** \$24.95.

**THE B-57 CANBERRA** was a rarity, a foreign-designed aircraft picked by the U. S. over American designs in the 1950s, a period of rapid design development. Martin acquired a license to produce the Canberra, first in a version nearly identical to the British B.2 (B-57A), and then the tandem-seat B-57B. Other minor versions followed and the Canberra was the first jet aircraft to be based in Vietnam.

Falcon's kit contains 46 pieces vacuum-formed in .050" white styrene with clear canopies. Landing gear wheels are included but there are no struts. The kit gives optional B-57A "fishbowl" and B-57B tandem canopies, bombardier's clear nose, and optional interiors. War Eagle (Falcon's U. S. distributor) has announced plans to offer



D. H. Minton



Aviation, Armour and  
Ship reference books  
for the serious  
historian,  
modeler  
and  
buff.

Write For

(619) 728-8456  
**FREE**  
BOOK CATALOG

Plus  
decals,  
& 5-view  
drawing sets.  
Say you saw our AD  
in Fine Scale Modeler.

Call for

## HUGE DISCOUNTS on plastic models!

Send 20 cent stamp  
for catalog.

**CACTUS AIRFORCE**

P.O. Box 761, College Station, TX 77841

## Compucolor

Authentic Enamels for Modelers  
\$1.29 per 1/2 oz. tin

Full Range of Aircraft &  
Armor Colors  
Computer Matched Colors

### AEROCUB

White Metal Castings

Propellers, Engines  
Machine Guns, Ejection Seats  
1/72 and 1/48 Scale

Why rob parts from kits?  
Mail order for  
Rareplanes, Contrail  
Formaplane

Kit Collectors' Corner  
Milliput Putty  
Full Line of Modeler's Needs

Pegasus Kits

Books, Magazines & Tools

Try Us, You'll Like Us.  
MasterCard & Visa

Send Two 20c Stamps for Lists To:

## ROSEMONT

**HOBBY SHOP**

P.O. Box 139  
Trexler Mall  
Trexlerstown, PA 18087  
(215) 398-0210

Compucolor Paints  
Dealer Orders Welcome

landing gear struts and three types of ejection seats in cast metal. There were no decals provided in the kit, but War Eagle offers a decal package containing markings for six U. S. A. F. machines for \$4.50 postage paid.

The parts are cleanly molded, but there is a minimum of raised panel detail. The clear parts are well molded with little distortion. Although the instructions include an assembly sequence, side and three-view drawings, and parts diagram, they don't have diagrams of the landing gear struts or interior details.

The fit was good except for the front engine nacelles and exhaust cones. These had to be sanded so that their cross section matched the main nacelles molded on the wing halves. The horizontal stabilizers had two joint lines; the outboard line matched best with the fuselage.

I wish the fuselage halves were molded separately on a thicker sheet of plastic; the pieces are large and a bit flimsy. Since there were no details provided for the engine intakes, I scored discs of styrene to represent the engine fronts and made the characteristic starter fairings by sanding down small bombs from my spares box.

I painted the model with Liqua-a-plate and used A. I. R. decals for most of the markings. The finished model scaled closely to the dimensions in *Jane's All the World's Aircraft, 1960/1961*, but it looks too heavy; the airfoil appears too thick and the tip tanks are oversize. It's a big model, measuring 16 1/4" long and 16 3/8" in span. It took 40 hours to complete, twice the time I had expected, but I spent some time detailing the interior and painting. I wouldn't recommend this kit to beginners, but experienced builders will enjoy the challenge. *D. H. Minton*



Kit: No. F310, Lavochkin Lagg-3

Scale: 1/72

Manufacturer: Red Star Model Kits, distributed by CMS Marketing International, 42 Anerley Hill, London SE19, England

Price: \$5.98.

MODELS OF RUSSIAN aircraft come few and far between, so I was glad to see the new Red Star kits of the Lagg-3, MiG-3, Yak-3, and Anatra. These are some of the last molds Frog made before it went under. The molds first went to Novo, the Russian-owned concern that purchased many of the Frog molds, and ended up back in England where the Red Star kits are now being produced.

The Lagg-3 kit is typical of Frog's last releases; what little detail is included is nicely done. The kit's 29 parts have fine raised panel lines and recessed control hinge lines. Clear parts (canopy and landing light) are thick and a bit too large to fit well. The nose gun breach blisters are missing but clearly visible in photos, and the gun barrels were

not cleanly molded. The well-printed decals include markings for two aircraft. There are no construction drawings, but a top view and two side views are included on the instruction sheet. Although the kit is simple and the instructions are clearly written, I would have liked construction diagrams and information about the aircraft.

The kit went together nicely with little filling required. There was a little overlap at the wing leading edge and the horizontal stabilizers were thicker than the stub roots on the fuselage. The propeller spinner had sinkholes that I found difficult to correct, so I substituted Heller's P-39 prop.

There appears to be an outline problem to the wing planform according to the drawings in *Air International*, Vol. 20, No. 1; there should be more sweep back to the leading edges. Otherwise, the model looks good. I took eight hours to complete the model. It can easily be handled by beginners, and it's a welcome addition to World War Two aircraft collections.

*Al Jones*

Kit: No. WP-108K, 1984 Corvette

Scale: 1/43

Manufacturer: Western Models, distributed by Model Car Masterpieces, 1525 W. MacArthur Blvd., Costa Mesa, CA 92626

Price: \$34.95.

THE LATEST CORVETTE has now appeared in a cast-metal kit. This 29-piece kit also has rubber tires, a tinted vacuum-

formed plastic "glass," and photoetched details. The body is split into upper and lower halves along the beltline, making it possible to produce accurate contours.

Detailing of the exterior is good, and includes left and right hand wheel covers. The interior detailing is minimal; no seat belts or door panel detail are given, but there is a decal representing the digital instrument panel. The tinted glass fits perfectly and





Wayne E. Moyer

helps hide some of the interior's shortcomings.

The simple instruction sheet shows an exploded view of the kit, but doesn't say that the interior should be attached to the top half of the body. The chassis is attached to the lower body half with screws. The parts fit well, but the upper body half was about 1/2 mm wider than the lower half. I simply (and carefully) bent the upper panel till I got a perfect fit. There were no headlight or taillight lenses so I used Floquil Luster Glaze red and amber over Bare-Metal Foil for the taillights and unstirred Tamiya Acrylic gloss white to simulate the headlights.

I found the recess at the beltline that represents the rubber trim strip unsatisfactory, so I carefully pulled the insulation from black microcircuit wire, glued one end into the recess with super glue, stretched it gently, and attached it at the other end. Black nylon fishing line or painted monofilament could also be used.

The kit would make a good first choice for someone who hasn't tackled a metal car kit. It's easy to assemble and it's accurately scaled to dimensions found in *Road & Track* and *Car and Driver*. I spent only six hours on my model, less than usual for me.

Wayne E. Moyer



**Kit:** No. 006, Yokosuka D4Y2 Type 11 or 12 Judy

**Scale:** 1/48

**Manufacturer:** JN, available through Hikosen, 68 Tamchi, Taira, Iwaki-Shi, 970, Japan  
**Price:** 3200 Yen plus 1120 Yen for surface shipping (about \$19.00 total).

EPOXY RESIN KITS may be something new to most modelers but they shouldn't be dismissed out of hand. This is the only 1/48 scale Judy available and the molding method produces results comparable to injection-molded styrene kits.

The most striking feature of the kit is the one-piece epoxy molding that includes wings, tail planes, and most of the fuselage with an integral cockpit tub. The engine cowling is a separate piece, and detail pieces such as the landing gear legs, prop, and night fighter gun are molded around brass wire to reinforce them. Small items such as the tail wheel and antennas are molded in white metal and the canopy is vacuum-formed acetate. There are no decals, but a basic instruction sheet (printed in Japanese) is included. Either the type 11 dive bomber or the type 12 night fighter can be built from this kit.

Considering the molding material, the detail in the large pieces is outstanding, with finely recessed panel lines and rivets. There is even grillework inside the ventral intake of the engine cowling. The smaller parts, however, are crude and require cleanup.

The parts fit together well and, since the main assembly consists of only two pieces, there was only one seam to fill and sand. I found that the thin trailing edges tended to chip easily; epoxy resin is not as resilient as styrene. I built my model with cyanoacrylate super glue.

The weakest part of the kit is the interior. Since the canopy is large and clear, I dressed up the interior with scratchbuilt replacements for the crudely molded seats and radio gear.

I spent ten hours on the model, most of it fixing up the interior. The assembly can be handled by any modeler, but extra work on the details calls for more advanced skills. The kit scales accurately with the information in the June 1981 issue of *Koku-Fan*, and it fills a void in 1/48 scale collections of Japanese aircraft.

Randy Fields

## Discount Hobby Center

Imported and domestic plastic models. Your mail order headquarters for: Hasegawa, Fujimi, Tamiya, ESCI, Monogram, Testor/Italeri, LS, Airfix, Nichimo, Matchbox, Otaki, MPC, Heller, KP, Revell, Takara, Tsukuda; books, magazines, and more. Send two 20c stamps for our latest catalog. Mastercard and VISA. See our other ad in classified section in this issue.

405 James St., Utica, NY 13501  
315-733-3741

## Lencraft

Our SPECIALTY is out of production & hard to find Aircraft-Ships-Armour-Decals

- |             |          |              |
|-------------|----------|--------------|
| • ITALERI   | • FROG   | • AIRFIX     |
| • MATCHBOX  | • NOVO   | • US AIRFIX  |
| • HAWK      | • ESCI   | • MPC AIRFIX |
| • VACUFORMS | • REVELL | • VEB        |
| • HASEGAWA  | • KP     | • HELLER     |

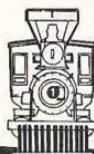
Free search service for those wanted kits.  
Monthly hot sheet mailing.  
Send large SASE for list.  
P.O. Box 8010, CALABASAS, CA 91302-8010

For Your Model Building Enjoyment:

**Fine  
Products  
For**

**Quality  
Modelers**

TOOLS, SAGAMI MOTORS,  
DRIVE UNITS & COMPONENTS,  
WHEELSETS, BRASS MODELS,  
GEARS, BOOKS, METRIC  
HARDWARE & MORE!



See Your NWSL Dealer or Write  
Direct if Unable to Locate.

**North West  
Short Line**

Box 423, Seattle, WA 98111



**LITTLE  
GENERALS**

**Canadian  
Mail Orders!**

One of the largest selections of  
plastic models, books, decals and lead figures  
available in Canada

"Send your request or inquiries to our retail  
location with self-addressed stamped  
envelope"

No. 9 South Centre Mall,  
100 Anderson Rd. S.E.,  
Calgary, Alberta T2J 3V1  
Tel. (403) 271-0662.

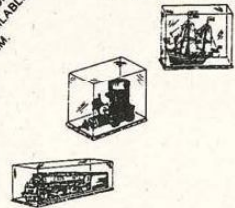




**DON'T HIDE 'EM!  
DISPLAY 'EM!**

IN A GALAXY III DISPLAY CASE  
• ANY SIZE • CLEAR ACRYLIC  
• SOLID WOOD BASES • YOUR CHOICE  
OF BASSWOOD OR WALNUT • AVAILABLE  
FULLY ASSEMBLED OR IN KIT FORM.

HERE THEY ARE!  
DISPLAY CASES FOR:



WE SPECIALIZE IN CUSTOM SIZES TO FIT YOUR NEEDS!  
FOR MORE INFO AND OUR "IDEA" BOOK, MAIL \$1.00 TO  
**BRUFEN PRODUCTS, BOX 334, ELGIN, MN 55932**

## MICHIANA

— YOUR SEARCH  
IS OVER —

## HOBBYLAND

343 Lincolnway West  
South Bend, Indiana 46601  
219-287-0180

— For all your hobby needs —

Armor - Aircraft - Ships  
Decals - Tools - Books & Mag.

## STYRENE RODDING

USES: PIPING, CONTROL LINES, BRACES, ETC.

DIA	PROTOTYPE SIZES		
	1:72	1:48	1:35
.010"	3/4"	1/2"	3/8"
.020"	1 1/2	1	3/4
.030"	2 1/8	1 1/2	1
.040"	2 7/8	2	1 3/8
.050"	3 5/8	2 3/8	1 3/4

12" pieces, 12/pkg  
available at your dealer or direct  
send 75¢ and a business size SAE  
for our "Augmentables" flyer

GRANDT LINE PRODUCTS, INC.  
1040B Shary Court, Concord CA 94518

## BIG DISCOUNTS

AIRCRAFT, ARMOR, SHIPS, PAINTS, BOOKS

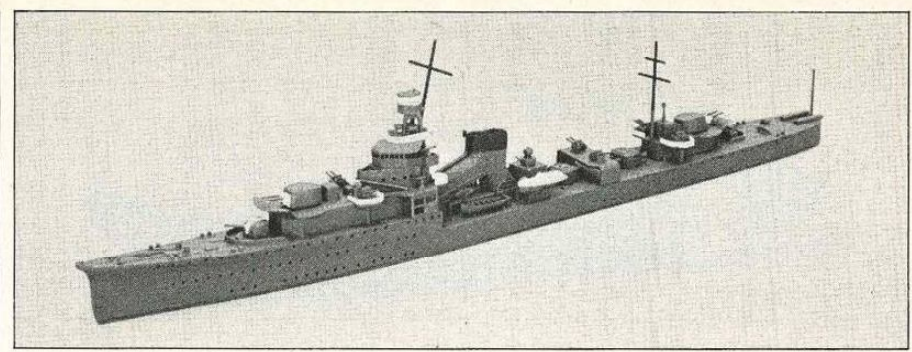
★ **BATTLE HOBBIES** ★  
P.O. BOX 184  
ST. PAUL PARK, MN 55071

CATALOG & UPDATES - \$1.00

All Regular Lines Plus:

- KOKU-FAN
- WAFFEN ARSENAL
- KOOKABURRA
- MARU MECHANIC
- SUPERMODEL
- NOVO & SMER
- OGONEK

★ VISA & MC ACCEPTED ★



**Kit:** No. 7605, *Yubari*

**Scale:** 1/700

**Manufacturer:** MRC-Tamiya, Model Rectifier Corporation, Edison, NJ 08817

**Price:** \$8.98.

THE 2,900-TON LIGHT CRUISER *Yubari* was revolutionary for its day; she had the speed and broadside of a 5,000-ton cruiser, and she was designed with her main guns and torpedo tubes on the center line, influencing later Japanese cruiser construction. She saw service in WWII and was torpedoed and sunk by the U. S. S. *Bluegill* in April 1944.

Like MRC-Tamiya's *Kiso*, this kit includes a wooden display base. The 60 styrene parts have above-average raised detail, but the hull has no portholes molded in and there are no anchors included in the kit. I

drilled out the portholes with a No. 75 drill bit. Other small parts such as the anti-aircraft guns and davits are well molded. The 7-step instruction sheet in my kit is in Japanese, but it's easy to follow.

Strangely, the davits (the launching rails for the lifeboats) are placed outboard of the boats in the kit. This is incorrect for it would be impossible to launch the boats, so I filled the mounting holes and drilled new ones in the correct positions, inboard of the boats.

The fit of the parts was excellent and the dimensions given in *Warships of the Imperial Japanese Navy, 1869-1945*. I took nine hours to build it, but I would recommend replacing the masts and flagstaff with stretched sprue, adding anchors, and rigging the model using the helpful diagram on the instructions.

Dennis Moore



Brian Gibbs

**Kit:** No. 909002, Avro Vulcan B.2

**Scale:** 1/72

**Manufacturer:** Airfix, Palitoy, Baker St., Coalville, Leicestershire, England

**Price:** \$18.95.

THE MOST SUCCESSFUL of the "V" bombers, the Vulcan has been one of the most wanted kits among British and European modelers. The Vulcan served for years as the mainstay of Britain's nuclear strike force, but the only action it saw was a single-aircraft, conventional strike on the runways of Port Stanley during the Falklands campaign.

Considering its size (18½" long, 16⅞" span), the 108-part kit has good raised detail. The 16-step instructions don't name the parts but they are easy to follow. Unfortunately, the painting guide only lists the names of Airfix's paints, unavailable in the U. S. The decals include markings for three aircraft: a white Blue Steel missile carrier of 617 Squadron, and camou-

flaged machines of 44 and 9 Squadrons.

The basic airframe consists of only ten pieces and it goes together quickly, but I spent a lot of time filling and sanding the long seams on the forward fuselage and wing joints, losing some of the detail in the process. The gap at the tail cone joint is the most difficult to fix. The wing trailing edges were a little thick, but the engine exhaust nozzles can easily be filed thin from the inside. The fairings and fences in step 15 should be added carefully.

I was pleased that Airfix included the Blue Steel standoff missile option. The kit scaled closely with the dimensions in *Scale Aircraft Modelling*, Vol. 4, No. 10, and looks spectacular when built. I used CompuColor Medium Sea Gray and Dark Green for the top camouflage and Testor Model Master Dark Gull Gray for the underside. It took me 18 hours to complete, but this is a big model, so naturally everything takes longer than usual.

Art Loder  
FSM





## DEALERS: Your Source for Models from Around the World.

ARII—Japan  
BANDHI—Japan  
ERTL-AMT—USA  
GUNZE SANGYO—Japan  
HUMBROL—England  
JOHAN—USA  
KOPRO—Czechoslovakia  
LODELLO—Mexico  
MPC—USA  
NICHIMO—Japan  
PLASTICART—E. Germany  
REVELL—W. Germany  
SUNNY—Japan  
TOMY—Japan  
UNION—Japan

AOSHIMA—Japan  
BURAGO—Italy  
ESCI—Italy  
HASEGAWA—Japan  
IMAI—Japan  
KAWAI—Japan  
LS—Japan  
MATCHBOX—England  
MONOGRAM—USA  
NITTO—Japan  
POL—Poland  
STARFIX—Israel  
TAMIYA—Japan  
TOKYO MAURI—Japan  
WILLIAMS—USA

ARIEL—Japan  
CROWN—Japan  
FUJIMI—Japan  
HELLER—France  
ITALERI—Italy  
KIKOLER—Brazil  
LINDBERG—USA  
MITSUI—Japan  
NAGANO—Japan  
OTAKI—Japan  
REVELL—USA  
SHARP—Japan  
TESTOR—USA  
TSUKUDA—Japan  
YODEL—Japan

Dealers: Send on your letterhead for terms and price list.

### ISLAND MODEL CRAFT SUPPLY, INC.

855'S' South Hoffman Lane  
Central Islip, New York 11722  
516-234-5090

## Great airbrushing is for the birds. The Binks birds.

The Raven and Wren will do just about anything an artist or craftsman will want to do. And, do it easier.

That's because they're precision engineered for great performance. And because they're made with the finest materials available. (We even made them to be serviced in the field, by you.)

They're strong, versatile, and reliable... the only airbrushes you'll ever need.

The double-action 

The single-action 

The Raven airbrush... for photo retouchers, artists, animators, architects, and fine model builders.

The Wren airbrush... for hobbyists, background work, auto refinishers, and general industry. A great choice for your first airbrush.



Binks offers complete airbrush outfits, air compressors, oil and water traps, air regulators, hose, canned propellant, and more. For more information on our complete line, write for brochure A59-12 FS

Binks Manufacturing Company  
9201 W. Belmont Ave., Franklin Park, IL 60131

**BINKS**

Binks is a registered trademark of Binks Manufacturing Company



FSM invites manufacturers, importers, and distributors to submit product samples. Information on new-product announcement and review policies is available from FSM Update, FINESCALE MODELER, 1027 North Seventh Street, Milwaukee, WI 53233.

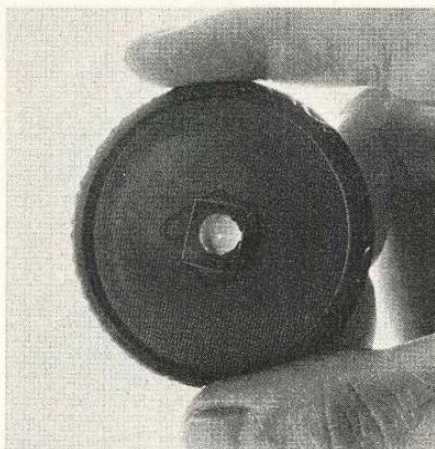
FSM readers should check their local hobby shops for the items in this column before writing directly to the manufacturers.

FINESCALE MODELER staff photos by  
A. L. Schmidt and Paul A. Erler



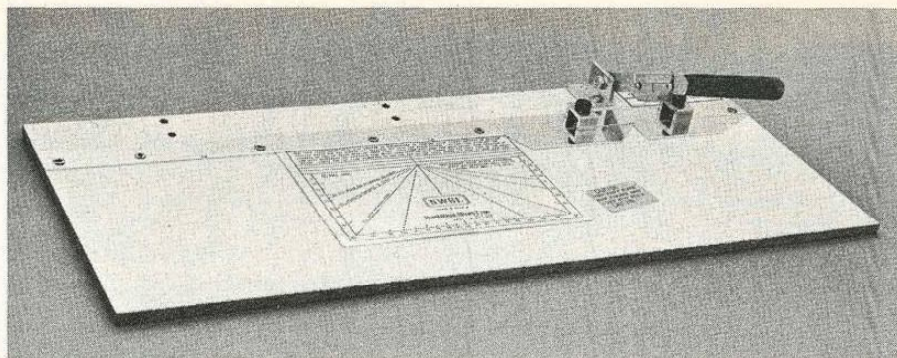
## 1/72 scale wargaming figures

Model Figures & Hobbies, Lower Balloo Road, Groomsport, County Down BT19 2LU, Northern Ireland, sells 1/72 scale metal Platoon 20 wargaming figures. Each figure sent to the U. S. costs 50 cents, including airmail postage; there is a minimum order of ten figures. Shown from left are No. RA21, Red Army artillery/mortar crewman; No. US15, U. S. Green Beret with a 12-gauge, pump-action shotgun; No. WS2, German lance corporal and private first class firing an MG42, circa 1944; No. VN25, North Vietnamese soldier advancing with an AK47; and No. CV2, civilian figure standing with an M16 rifle.



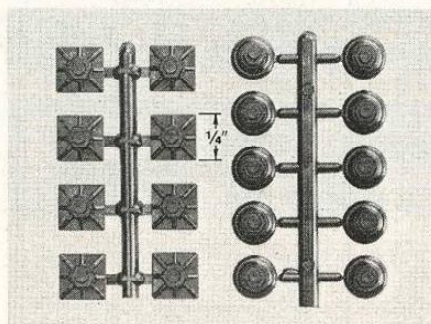
## Pinhole 35 mm camera attachment

The Fricko focusing pinhole lens with colens for 35 mm cameras is available from the A. J. Fricko Company, P. O. Box 43276, Cincinnati, OH 45243. The diameter of the pinhole is .018". The attachment replaces the normal lens of the camera. According to Fricko, the pinhole lens with colens provides sharper images, shorter exposure times, and a brighter viewing screen than the firm's regular pinhole lens. Shown is product No. 274-845, Fricko focusing pinhole lens with colens for Nikon 35 mm SLR cameras, \$32.95.



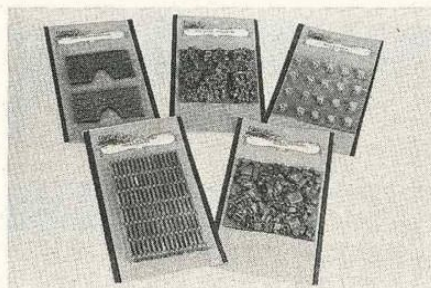
## Cutting tool

New from NorthWest Short Line, Box 423, Seattle, WA 98111, is the Chopper III, item No. 59-4, \$24.95. The Chopper III has an 18" base and uses a single-edge razor blade to make square and miter cuts on miniature wood and styrene strips. Three extra razor blades are included.



## Large hex nuts and washers

Recently introduced by Grandt Line Products, Inc., 1040B Shary Court, Concord, CA 94518, are No. 3911 (left), .100" hex nuts on .250" square ribbed washers, and No. 3912, .100" hex nuts on .250" round cast-iron washers. The parts are injection-molded in black styrene. There are 24 square ribbed washers per package and 30 round cast-iron washers per package; each package is \$1.50.



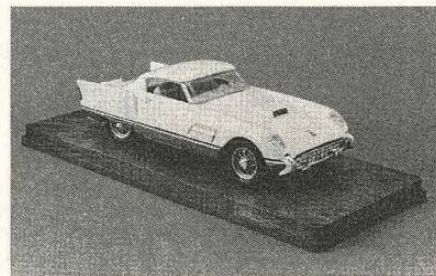
## Scenery materials

Chooch Enterprises, Inc., P. O. Box 217, Redmond, WA 98052, sells HO (1/87) scale scenery materials. Shown are (clockwise from bottom left) No. 7025, small timber-piled cribbing retaining wall, \$6.50; No. 7038, cut-stone culvert, \$5.00; No. 7006, assorted junk piles, \$6.50; No. 8007, 20 small tree stumps, \$6.50; and No. 7128, automobile junk piles, \$7.99.



## Enamel paints

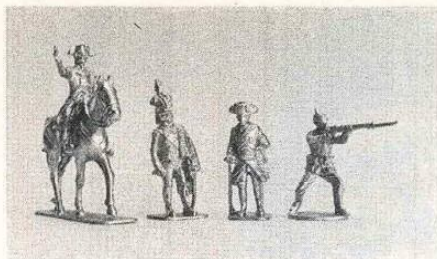
Pactra Industries, 16946 Sherman Way, Suite 300, Van Nuys, CA 91406, has introduced Authentic Scale Model enamel paints to replace its line of Scale Model Flats. Pactra says these enamel paints include more flat colors than the Scale Model Flats paints, as well as a full line of gloss colors. Most of the colors have Federal Standard 595a (FS) numbers. The 3/8-ounce bottle retails for \$1.29, while the 3.03-ounce spray can retails for \$2.29. There are 32 flat and 12 gloss bottled colors available; the spray can line includes 19 flat and 11 gloss colors.



## 1/43 scale Ferrari

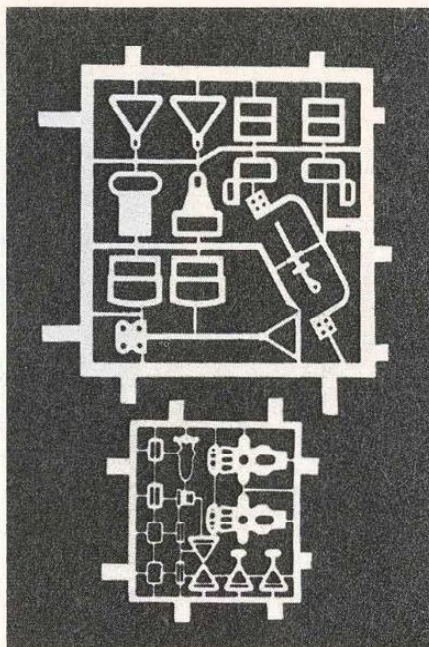
Idea 3 of Italy produces a fully assembled, diecast 1956 Ferrari 410 S. A. in 1/43 scale. This two-tone white and light metallic blue model is a replica of the Ferrari shown by Pininfarina at the Paris Car Show in 1956. It is available for \$20.00 plus \$2.50 for postage from Lilliput Motor Car Co., P. O. Box 156, Clarksburg, NJ 08510.





### 30 mm figures

The Model Shoppe, 323½ Richmond Street, El Segundo, CA 90245, imports white metal figures from Tradition Scandinavia of Sweden. The figures are 30 mm tall excluding headgear, and represent subjects from medieval times to World War Two. Shown from left are George Washington, \$5.08; Joachim Murat in Hussar uniform, \$3.19; Frederick the Great, \$3.19; and World War One German soldier, \$2.38. Send \$1.00 for the 1984 Tradition Scandinavia catalog.



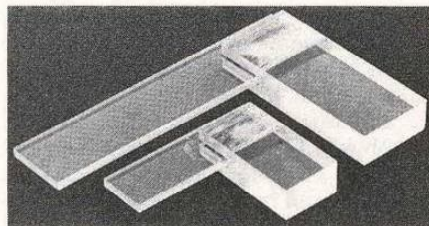
### Seat belt buckles

Photoetched, half-hard stainless steel aircraft seat belt buckles are available from Model Technologies, 15561 Product Lane, Unit D, Huntington Beach, CA 92649. Shown are No. MT 0005, 1/48 scale American World War Two buckles with mounting hardware (top), \$3.00, and No. MT 0003, 1/72 scale German WWII buckles with rudder pedals, \$2.50.



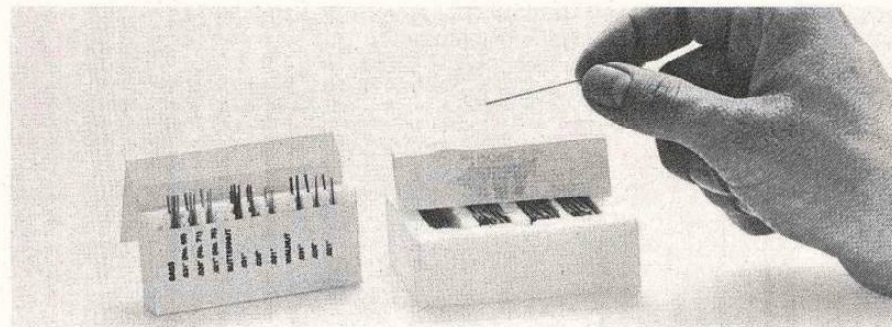
### Auto detailing supplies

Available from MSC Model Products, a division of Millennium Sales Corporation, P. O. Box 28135, Station No. 16, Lakewood, CO 80228, are detailing supplies including spark plug wire, radiator hose, heater hose, brake line, and braided metal fuel line for 1/25, 1/16, 1/12, and 1/8 scale automobiles. MSC says that the brake line can also be used for aircraft fuel lines. Each package sells for \$2.00. U. S. postage is 50 cents for the first three items and 25 cents for each additional item. Outside the U. S., add \$1.00 for the first three items and 50 cents for each additional item.



### Acrylic squares

The Greenhouse Miniature Shop, 6008 Secor Road, Toledo, OH 43613, sells 2" and 4" clear acrylic squares. The 2" square costs \$4.00, while the 4" square costs \$5.00.



### Scale treenails

Dowls, P. O. Box 425, Glen Head, NY 11545, is selling treenails for ships in 1/8", 3/16", 1/4", and 3/8" scales. They are designed for drill sizes No. 68 (.031"), No. 71 (.026"), and No. 75 (.021") and are available in basswood, butternut, or walnut. Basswood sells for 50 cents per lineal foot, butternut for 60

cents, and walnut for 80 cents. The minimum order is ten lineal feet. Add \$1.50 for postage and handling in the U. S. Overseas residents should send U. S. funds and add \$3.00 for postage and handling. A sample package (at left in photo) of three woods in three sizes or your choice of woods and sizes is available for \$2.00.

FSM

### MILITARY HISTORY ON VIDEOCASSETTES

See military history as it happened! World War I through the Falklands campaign. The other side of World War II: original German combat newsreels and features of the great battles. Rare Allied Army and Air Force documentaries. Also Korea, Vietnam, and contemporary Soviet Army. Over 300 titles reproduced from original source materials. Beta/VHS, also PAL Standard. Reasonable prices, fast service. Write or phone for free illustrated catalog. **INTERNATIONAL HISTORIC FILMS, Box 29035, Chicago, Illinois 60629, Phone 312-436-8051**

### 30MM Tradition & "WILLIE" EDWARD SUREN

Figures for the serious collector, dioramist & artist  
CATALOG \$1.00 - refundable  
DEALER INQUIRIES INVITED

THE MODEL SHOPPE  
323 1/2 RICHMOND ST.  
EL SEGUNDO, CA 90245

### Icarus MODELS

17 N. 4TH ST.  
EMMAUS, PA. 18049

VAC FORMS FOR THE AVERAGE MODELER

### SCALE DOCUMENTATION

SCALE DRAWINGS MODEL PLANS PHOTOS BOOKS

1984 AIRPLANE CATALOG \$3.00

REPLA-TECH INTERNATIONAL  
48500 MC KENZIE HWY.  
VIDA, OREGON 97488

### RIVERSIDE HOBBIES

PLASTIC MODELS FROM AROUND THE WORLD

AIRCRAFT	MONSTERS	SHIPS
ARMOR	MOTORCYCLES	SPACESHIPS
CARS	ROBOTS	TRAINS
GUNS	SCI-FI	TRUCKS

Send \$2.00 for complete catalog  
6407 Riverside Blvd., Sacramento, Ca. 95831

### Needing Help Finding Kits?

Ant Collector's Clearinghouse

send \$1.00 for sample issue

3213 HARDY DR.  
EDMOND, OKLA. 73034

### The SOURCE For...

Casting resins and mold making materials

"Make one or one thousand with Castolite."

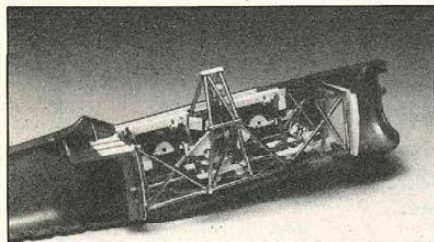
Catalogue \$1.00

### CASTOLITE

Dept. 84 P/FS  
P.O. Box 391  
Woodstock, IL 60098

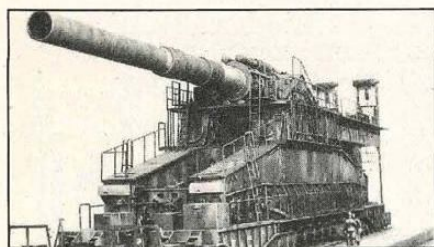


# **NEXT ISSUE FEATURES**



Superdetailing a 1/48 scale AT-6. Bob Steinbrunn.

**FINESCALE MODELER** celebrates the start of its third full year of publication with a special salute to an aircraft with considerably more longevity – the North American AT-6, which celebrates its 50th anniversary in 1985. Aviation artist Ken Sommerfield returns to FSM's pages with a research data piece – including a dramatic, full-color painting – on one of the many T-6s flying today in civilian registry, and superdetail artist Bob Steinbrunn adds an article telling how he spent 600 hours improving Monogram's 1/48 scale AT-6!



German railway gun Dora. Lewis Pruneau.

FSM Showcase features a one-of-a-kind model of a one-of-a-kind subject: The enormous German railway gun Dora. Lewis Pruneau's 1/35 scale model of Dora is over 40" long! Rounding out the content you'll find articles on building and detailing a 1/72 scale vacuum-formed submarine kit, and scratch-building a 1/6 scale figure of WWI German ace Oswald Boelcke, as well as FSM's regular mix of columns and departments!

**ALL IN  
JANUARY/  
FEBRUARY  
FSM!**



## **FROM THE EDITOR**

### **American Dress and Detail**

TWO ISSUES AGO, with no fanfare, we added a new ingredient to FSM's bimonthly mix of modeling information, a series of illustrations called "American Dress and Detail." Intended as reference and inspiration for figure modelers, each of these color illustrations shows the clothing worn by American fighting men. Number three in the series appears on page 31 of this issue.

At the risk of alienating some international readers, it's *American* dress and detail. While some of the illustrations may show foreign troops on North American soil, the emphasis will be on domestic subjects. So much has been published, and continues to be published, on Napoleonic and other European military dress that it seems appropriate that an American magazine should concentrate on the clothing worn here. Besides, artist Rod Stafford, who started the series, is first and foremost interested in things American. So American it will be.

In just over 400 years the variety of military dress in North America has been nothing short of amazing. That means that there's plenty of subject matter for the series to explore, and I'm seeking more artists to contribute to it. Also, because the illustrations are meant to inspire modeling, we'd like to see photos of models based on "American Dress and Detail," and if we receive enough of them, I'll run a gallery of figures in a future issue.

Let us know what you think about "American Dress and Detail." Your comments will determine the direction this series takes, and if you'll let me know what subjects you'd like to see, I'll do my best to round up reference material and artists so those subjects can eventually appear in FSM.

Editor

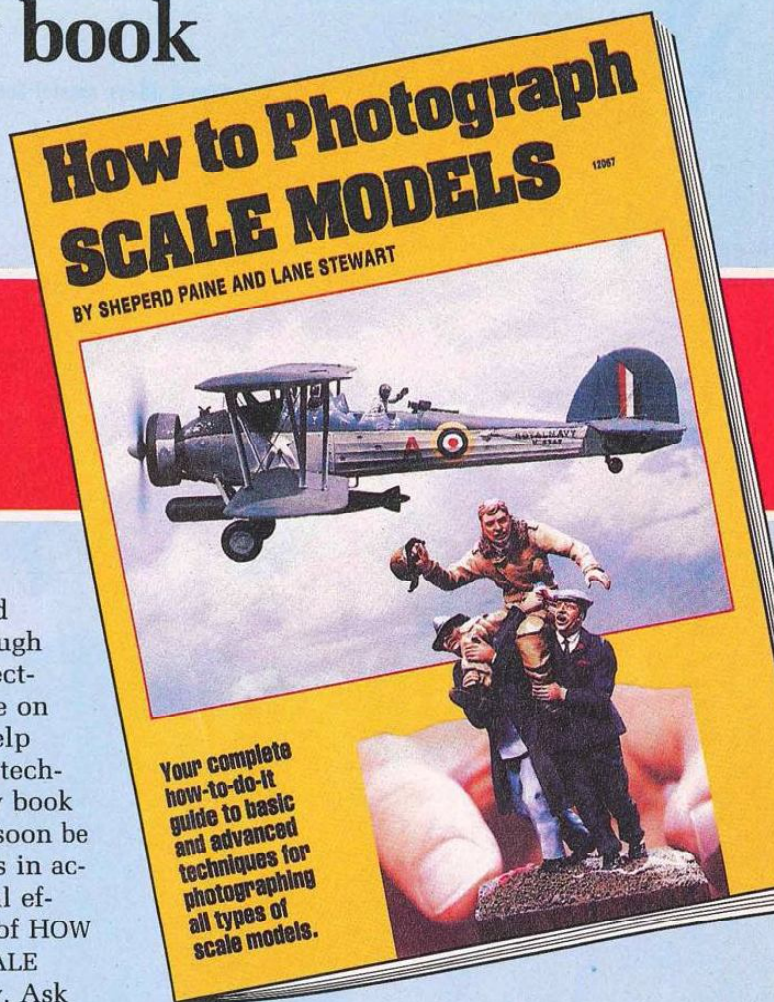
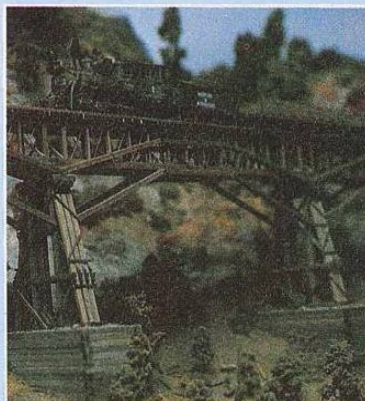


# An important new book for all modelers – FOR YOU!

## HOW TO PHOTOGRAPH SCALE MODELS

If you've ever wanted to photograph your favorite models, but didn't know what equipment you'd need or what techniques to use, this book is for you! **HOW TO PHOTOGRAPH SCALE MODELS**, by Sheperd Paine and Lane Stewart, will be your complete how-to guide to photographing all types of models. Whether you're interested in photographing single subjects (such as a model ship, airplane, or auto), complete model railroads, figures, dollhouses, boxed dioramas, or a variety of other types of models, this book

will show you how. In 64 pages, Paine and Stewart take you through the basics – from selecting a camera to advice on composition – then help you master advanced techniques. With this new book as your guide, you'll soon be photographing models in action, and using special effects! Buy your copy of **HOW TO PHOTOGRAPH SCALE MODELS**, \$8.95, today. Ask for a copy at your hobby shop, or use the coupon below to order direct!



- *Getting started*
- *Taking your first model pictures*
- *Adding to your bag of tricks*
- *Moving indoors: model photography with artificial light*
- *Special setups for single models*
- *Photographing model railroad layouts*
- *Photographing miniature rooms, dollhouses, and boxed dioramas*
- *Photographing models in action*
- *Tabletop techniques and special effects*
- *Professional equipment and techniques*

DEPT. 38652

**KALMBACH BOOKS.**

1027 N. Seventh Street, Milwaukee, WI 53233

Enclosed is \$\_\_\_\_\_ for \_\_\_\_\_ copies of **HOW TO PHOTOGRAPH SCALE MODELS** at \$8.95. Include for postage and handling: U.S. \$1; foreign \$1.50. Wisconsin residents add 5 per cent sales tax.

Name \_\_\_\_\_

Street \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Charge to: ☐ MASTERCARD ☐ VISA Exp. Date \_\_\_\_\_

Card Number \_\_\_\_\_

Signature \_\_\_\_\_

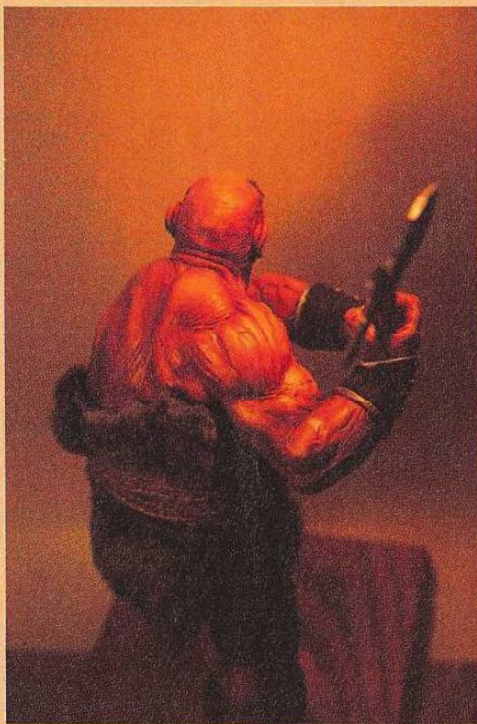
If you don't wish to clip your magazine, copy the necessary information including department number on a separate sheet. Price subject to change. © 1984 Kalmbach Publishing Co.



This 13¾"-tall, red-faced giant won a silver medal for Jeff Easley at the 1983 Military Miniature Society of Illinois show.







All photos, Jim Holloway

(Above left) Jeff used sheepskin scraps and jute twine for the loincloth, and the decoration is embossed copper foil. (Above right) The skin tones are Burnt Sienna highlighted with Titanium White.

## FSM SHOWCASE

# Jeff Easley's eye-catching giant

**T**HE FIERCE-LOOKING creature featured on these two pages would feel right at home in Brobdingnag, the imaginary country inhabited by giants in *Gulliver's Travels*.

Jeff Easley of Lake Geneva, Wisconsin, won a silver medal at the 1983 Military Miniature Society of Illinois show for his model of an ax-wielding, enraged giant. "I tinkered with the thing for quite a while in my spare time," he told FSM. "But in an effort to have it ready for the Chicago show, I built the lower half of the body, prepared the base, made the ax, applied the fur, and painted the whole thing in about one week. I finished the model at 5:30 on the morning of the show."

"In the course of my employment as an artist at TSR Hobbies [makers of Dungeons & Dragons and other fantasy and role-playing games] I'm called on to illustrate all types of fantasy characters. Giants are a particular favorite of mine to render two dimensionally, so it wasn't altogether unlikely

that I would choose to do a 3-D version."

While he's an expert when it comes to giants, Jeff says that anyone unfamiliar with this type of subject who is going to attempt a similar model needs to acquire as much reference material as possible.

This 13¾"-tall model was constructed primarily of Super Sculpey (a clay-like modeling compound sold in craft stores) applied over a paper mache base. Jeff applied the paper mache to a partial armature of threaded rod and aluminum foil, and he used paint thinner to smooth the Sculpey to its final finish.

The giant's bushy eyebrows are from stranded electrical wire, and brass tacks and nails were used on the boots and armbands. The loincloth was made from sheepskin scraps and jute twine and the decoration on the loincloth is embossed copper foil. Jeff constructed the ax from dowel, A+B putty, and Duro E-pox-e Putty.

The model was painted with Utrecht brand oils. To create the skin tones, Jeff

applied straight Burnt Sienna, then highlighted with Titanium White. He painted the boots with Burnt Umber and buffed them while the paint was still wet. To achieve the silver look on the boots, ax, and other areas, Jeff stained them with Testors paint, then daubed on dilute India ink to dirty them up.

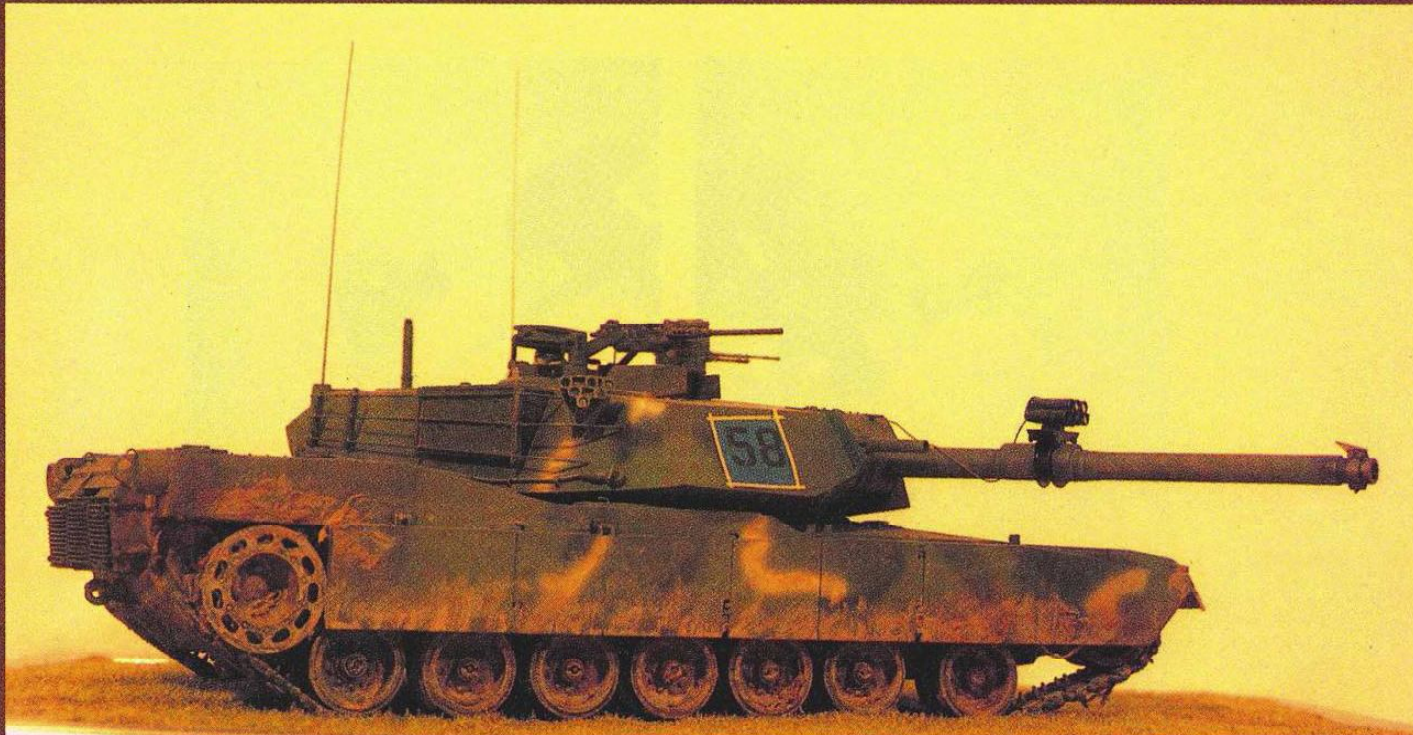
"I was pretty satisfied with the anatomical detail on the giant," Jeff says, "but at this point I can see a great potential for refining that aspect even more in the future."

"The giant is the first scratchbuilt figure I've built since I made a caveman diorama for a sixth grade class project, though I've done related projects my entire life. Until recently, I was unaware of the various exhibitions held regularly around the country. I hope to start producing models on a regular basis and, if so, fantasy-related subjects will probably remain my favorite theme."

If Jeff's new models are as striking as his giant, the rest of us can hardly wait to see them.

**FSM**





# Superdetailing Tamiya's 1/35 scale M1 ABRAMS

Data and techniques for making a fine model even finer

BY STEVE ZALOGA

**T**HESE DAYS, the quality of new armor kits is so high that a fine model can be built out of the box. The Tamiya M1 Abrams tank is such a kit, but like most kits it includes some small details that have been simplified. Correcting those simplified details is the subject of this article.

The main areas requiring attention are the tank commander's cupola, rear engine exhaust gratings, loader's M240 machine gun, turret basket, smoke mortar mounts, lights, and muzzle reference system. Figure 1 shows the affected areas.

**Revising the commander's cupola.** The basic problems with the tank commander's (TC) cupola are that the periscopes are molded in solid, opaque plastic (the rest of the kit's periscopes have clear inserts), and the detail on the M2

machine gun mount is oversimplified. Since correcting the periscope problem is the most difficult aspect of this project, let's start there.

The first step is removing the molded periscopes from the cupola, which is an integral part of the upper turret half (part C3). Figure 2 shows the portions that must be cut away. I used an X-acto razor saw, and had to work carefully on the right side so I didn't remove the lower base section where the TC auxiliary sight (B6) is attached.

Once the molded periscopes have been removed, carefully file and sand the cupola flush in these areas. I inserted clear plexiglass periscopes from below, the same way the real periscopes are mounted, so the next step was to cut appropriate rectangular openings in the cupola. Cutting five

precise 5 mm x 1.5 mm openings may sound like hard work, but it's made a good deal easier because the openings are almost exactly the size and shape of a standard flat needle file. I started the holes with a drill, then worked with files and a Dremel motor tool until I could fit a fine flat needle file into the rough openings to finish the rectangles.

You'll also have to hollow out the periscope mount at the rear of the cupola where the turret hatch hinges are to be fitted. I did this with a Dremel tool and fine cutting burrs, followed by filing.

Next replace the periscope covers. Hollowing out the kit covers would be more work than making a new set from .010" sheet plastic, so I scratchbuilt them, Fig. 2. Take care to make the





(Top, left and right) Blue panels taped to the turret identify this Abrams as a tank of the "Blue Army" on maneuvers. The device located midway along the gun barrel is a launcher for pyrotechnics that simulate main gun firing. (Above left) Details added to the turret rear include fabric webbing for stowing personal gear and an antenna mount. The red handle in the recess below the turret is for actuating the fire extinguisher. (Above center) Steve extensively rebuilt the engine grating, reworked the rear lights, and (above right) left off the panels over the drive sprockets.

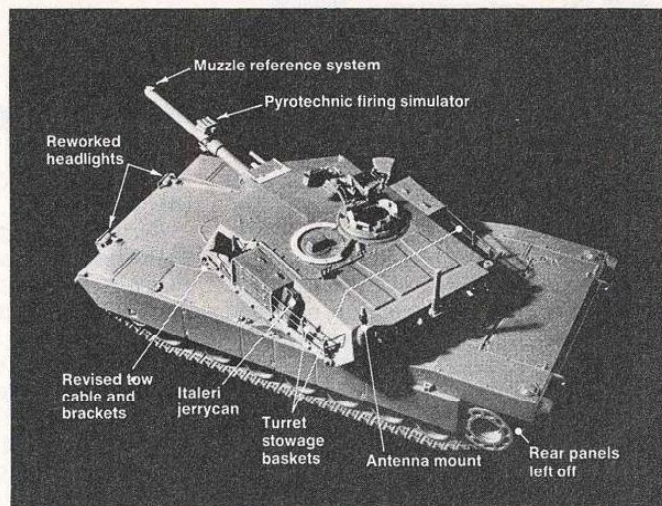
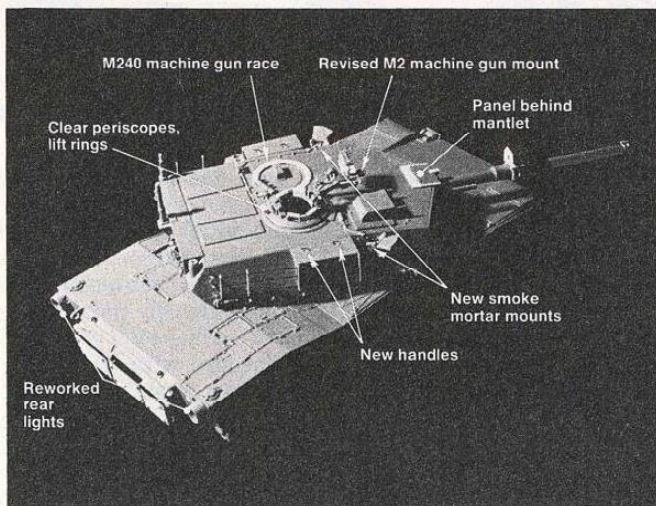
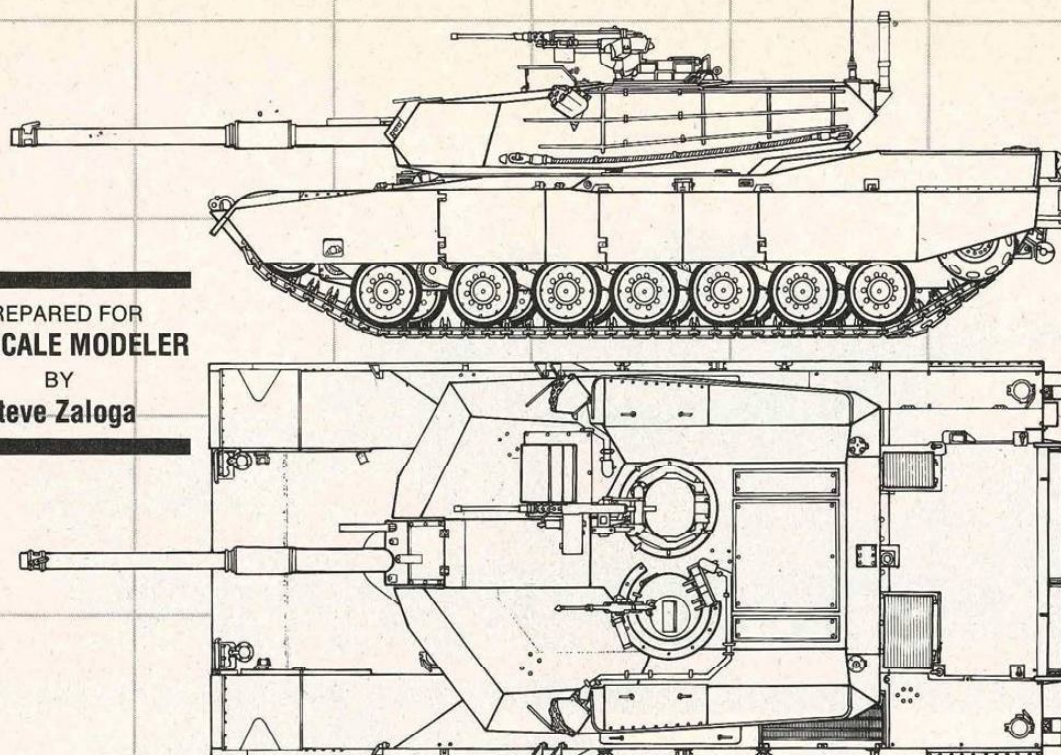


Fig. 1. An overview of the reworked areas and added details on the Abrams.

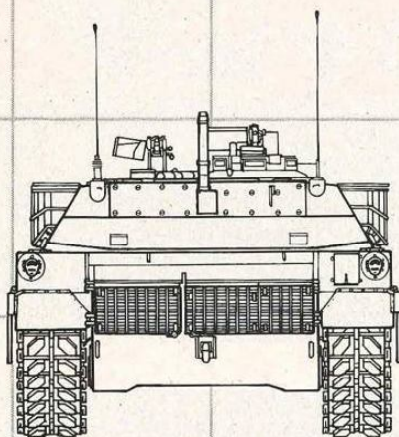


PREPARED FOR  
**FINESCALE MODELER**  
BY  
**Steve Zaloga**

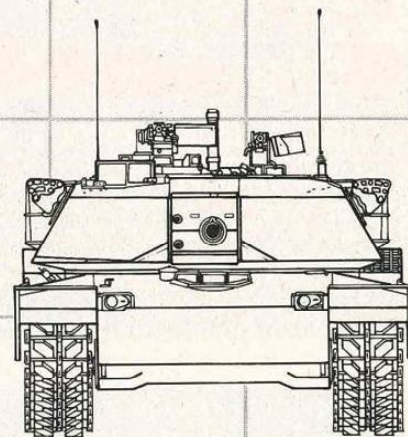


#### M1 ABRAMS

**1/70 SCALE**



Length (hull):	310.5"
Width:	144"
Height (to turret roof):	93.5"
Ground clearance:	19"
Track width:	25"
Combat weight:	60 tons
Ground pressure:	13.3 psi
Maximum speed:	40 mph (cross-country)
Engine:	Avco 1500 hp turbine
Fuel:	Diesel
Operating range:	275 miles
Crew:	4
Primary weapon:	105 mm rifled cannon (M68)
Coaxial weapon:	7.62 mm machine gun (M240)
Loader's weapon:	7.62 mm machine gun (M240)
Commander's weapon:	.50 caliber machine gun (M2)
Ammunition storage:	105 mm 55 rounds 7.62 mm 11,400 rounds .50 caliber 1,000 rounds
Smoke generation:	M250 grenade launcher, integral engine smoke generator



covers uniform, and be sure they are not so large that they prevent the hatch from closing properly.

**Clear plexiglass periscopes.** I made periscopes from  $\frac{1}{16}$ " clear plexiglass. You can find this clear acrylic material at large art supply shops or plastic supply houses (check your Yellow Pages under "Plastics"). Art shops usually sell plexiglass by the foot, and a 12"-square panel will furnish periscopes for several dozen tank models. The plastic sheet usually comes backed on both sides with brown protective paper so you don't scratch the surface while you

cut the material, and you should leave this paper on.

Acrylic is tougher and more brittle than sheet styrene, so I cut it with a razor saw. Although it is possible to cut plexiglass by scoring the surface and then breaking it along the scored line, this technique leaves a jagged edge. For periscopes, we need an even, square edge, so cut all the way through with the saw. Since all the cupola periscopes are 4.5 mm wide, I cut a 4"-long strip this width. After cutting, plane the cut edges of the strip by scraping with the edge of an ordinary X-acto No. 11 knife

blade, then sand and polish with progressively finer grades of sandpaper.

Now cut individual periscopes from the strip. I cut these larger than scale size (about 7 mm high) because the extra length makes the tiny parts easier to handle. After cutting each periscope, polish the cut edges with a fine file, then test fit it into its opening from underneath. Once the parts fit properly and all cutting and polishing is done, you can remove the protective paper. Usually the paper leaves traces of adhesive residue which can be removed with rubbing alcohol.

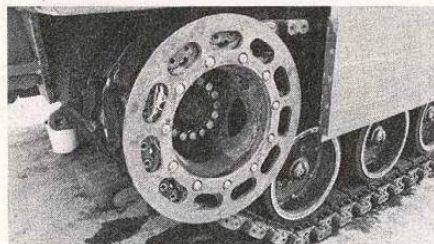
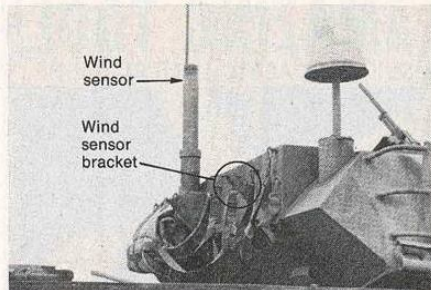




Muzzle Reference System details.

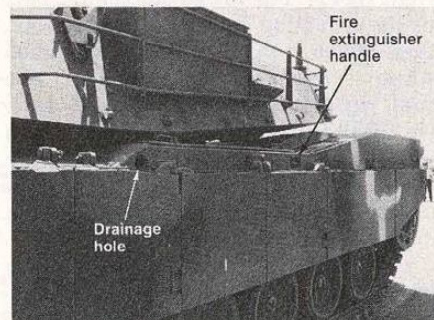
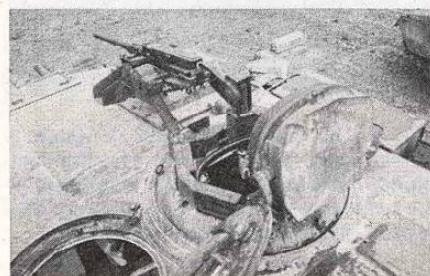
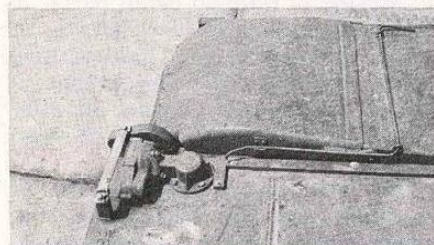


(Left) The turret side, showing the smoke mortar bracket and the U clips for the tow cable. (Right) The turret rear, with the rest bracket for the wind sensor and the attachments for stowage webbing. The amber "bubble-gum" light is fitted to test vehicles.

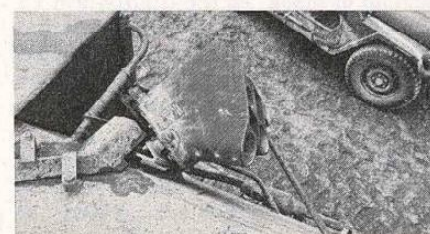
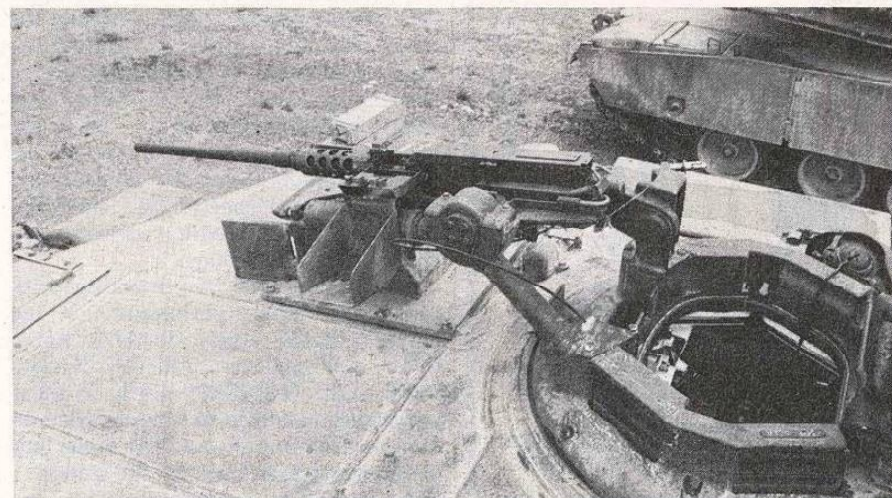


(Above left) Note the undercut on the engine gratings. (Above right) The rear light covers on production M1s include small rectangular openings not found on the kit.

## PRODUCTION M1 DETAILS



(Top of three) Note the four lightening holes in the drive sprocket, which must be added to the Tamiya part if the rear panel is left off, as here. (Middle) A closeup of the headlight, also showing the fender release bar which can be added to the model using sprue. (Above) The fire extinguisher actuator must be added to the kit, as well as the drainage hole. This view also shows details of the hinged attachments for the skirt armor.



(Above and top, three photos) Details of the tank commander's cupola, including the periscopes and the M2 HB .50 caliber machine gun mount, which is normally trained and fired from inside the tank. The rear view (top left) shows the tank commander's auxiliary sight.

(Far left) The M240 machine gun and (left) the smoke mortar attachment.



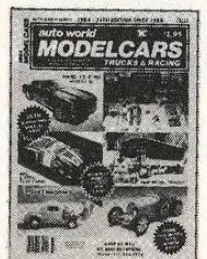
# AMAZING TOOL!

SLICES PLASTIC LIKE BUTTER



**INFLECTS BATTLE DAMAGE ON PLASTIC WAR MODELS**

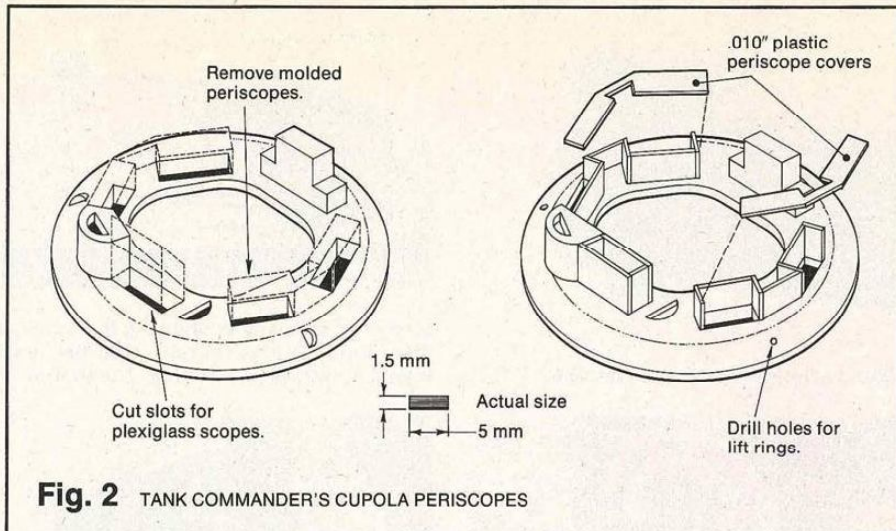
"Of all the more advanced tools you could get, none is better for making customizing easier"...Dennis Doty, master modeler/author of "The Complete Book of MODEL CAR BUILDING".  
**No. 28-225 AUTOCUTTER Hot Knife with Battle Damage Tips, \$14.95 plus \$2.00 handling.**



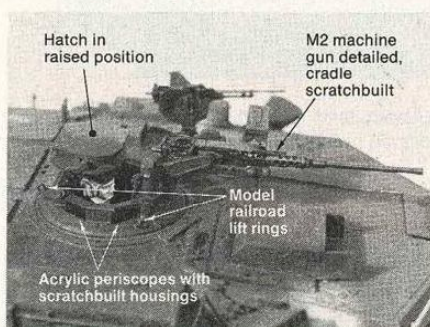
**NEW MODEL CARS, TRUCKS, SLOT RACING CATALOG**  
The "A to Z" catalog of AMT, MPC, Monogram, Tamiya, Pocho & more. Scratch supplies and decals.  
**130 pages, 35th Edition, \$3.00 pp.**

**auto world**

701 N. Keyser Ave. / Dept. 46  
Scranton, PA 18508



**Fig. 2** TANK COMMANDER'S CUPOLA PERISCOPES



**Fig. 3.** The tank commander's hatch is locked open, with the cover over the commander's head to allow him all-around vision while at the same time offering protection from overhead artillery bursts.

I attached the completed periscopes to a strip of masking tape, pressing the outer face of the periscope against the tape. In addition to preventing loss of these tiny parts, the masking tape makes painting them easy — when the time comes to paint the rest of the model, I simply spray the exposed surfaces of the periscopes with Floquil Engine Black (RR10), which covers everything but the outer face.

As long as you are working with plexiglass, make periscopes for the driver's hatch (B50), loader's hatch (B31), and gunner's AN/VSG-X day-night sight (B49/B60). Each of these periscopes is a different shape and size and must be custom cut. The right half of the plexiglass back of the gunner's sight should be painted metallic blue instead of black, as the night-sight optics look different than the day portion. I prefer plexiglass to the acetate sheet provided in the kit for these periscopes, as it provides a more realistic simulation of solid, armored glass.

**Finishing the TC cupola details.** Now we can turn to the other details on the TC cupola. Three lifting rings on the outer edge of the cupola ring are

represented by semicircular bulges on the kit. Remove the bulges and replace them with molded rings. Several manufacturers of railroad detail parts\* offer small packets of black plastic lift rings, so a trip to your local railroad hobby shop is in order. These rings are handy, and later on I'll point out other places on the model where they are needed.

The next item to rework is the TC auxiliary sight (B6). This consists of an armored cover with a tubular periscope sight inside. I hollowed out the kit part using a cutting burr in a motor tool, then added a piece of round stretched sprue to represent the periscope. The oval sight is a modified Grandt Line No. 5039 HO scale turnbuckle. I added the rest of the small details to the auxiliary sight using stretched sprue, and mounted the right attachment arm (part B4) for the machine gun.

The main problem with the machine gun mount on the TC cupola is oversimplification. The cradle for the M2 machine gun is too small and not sufficiently intricate. I cut away the cradle from the machine gun (B11), then built up a new cradle from scratch.

The basis for the scratchbuilt cradle is a length of sprue cut in half and hollowed out to form a small, U-shaped channel. The hardest aspect of this operation is getting the cradle shaped so that the machine gun fits properly inside it. The photos of the real tank show how intricate this cradle is, but keep in mind that much of the detail is hidden when the machine gun is attached, so you don't have to go overboard detailing the cradle. I improved the hydraulic cylinder (B3) by cutting

\*Detail Associates, P. O. Box 197, Santa Maria, CA 93456.  
Grandt Line, 1040B Shary Court, Concord, CA 94518.  
Precision Scale Co., 1120-A Gum Avenue, Woodland, CA 95695.

**ATTENTION PLASTIC MODEL BUILDERS**

**NEW TENAX-7R**

**SPACE AGE PLASTIC WELDER**

**Makes Plastic Cement a Thing of the Past!**

One Drop Welds a Seam, FAST!  
50 CENTS Postage and Handling  
DEALER INQUIRIES WELCOME  
**SEND NOW!**

**R.H. HEBNER DIST.** ☐ \$2.00 Enclosed  
P.O. Box AH Dept 1  
Spencerport, N.Y. 14559

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_



the cylinder off the attachment arm, removing the flash between the pieces, and reattaching the cylinder. Part B5 is basically sound, but the area where it attaches to the cradle is crude, so I cut off the locating plug and substituted a more delicate one.

The ammo box and its cradle (B7, B8) are also too simple. I scraped off the cradle and scratchbuilt a new one from sheet plastic, then added lifting handles on the outside end of the box, built a new feed channel from sheet plastic, and added ammunition from a package of Squadron German infantry details.

**Reworking the M2 and M240 machine guns.** The M2 machine gun, Fig. 3, is pretty good, but can use extra detailing. I drilled out the cooling holes on the barrel, trimmed away flash, and filled in the gaps left when I removed the original cradle. I also drilled out the barrel and cut off the front and rear sights (these are not ordinarily fitted; the machine gun is remote controlled and aimed with an internal sight). Instead of being glued into the cradle assembly, the M2 was left off the tank so it could be painted separately.

The M240 machine gun (B17) requires less work than the M2. Cut the cradle off the gun, sand the pintle mount arms off the collector box under the gun, and replace them and the sides of the cradle with delicate sheet plastic parts. Add smaller details made from sheet plastic and stretched sprue.

I also threw out the M240 gun race (B32), replacing it with a thinner piece made from .010" styrene sheet. You can accurately cut circular pieces like this using a drafting compass with a frisket cutting attachment. Available at art supply stores, the cutting attachment is used in place of the drawing lead. Don't use the sharp end of the cutting attachment when cutting sheet plastic — it tends to wander. Instead, use the blunt end of the tip, which is sharp enough to scribe the plastic without straying off course.

I painted both machine guns the same way. First, I sprayed them with Floquil Engine Black (RR10). When the paint was dry, I rubbed a pencil against fine sandpaper to make powdered graphite, which I applied to the guns with my finger to give them a metallic sheen. Finally, I used a silver-colored pencil to bring out metallic highlights. The machine guns were attached after the rest of the tank had been painted.

**Finishing the turret details.** The mounts for the smoke mortars (B21, B22) are crude, so I made new ones from sheet plastic. The turret baskets (B1, B2, B56) are too thick, so I substituted brass wire. The hardest part of this is not making the new wire pieces, but filling in the large holes on the tur-

ret side where the original plastic parts fit. I plugged the holes from the inside using conical pieces of stretched sprue, covering each on the outside with a drop of a homemade filler consisting of sheet plastic scraps melted in liquid plastic cement, Fig. 4. When the filler is dry, cut the plug flush with the surface of the turret and sand smooth.

Replace the handles on the stowage bin covers (B34, B35) with the more delicate lifting handles from an Italeri M-47 tank kit. I substituted an Italeri jerrycan for part B54, and added a new jerrycan rack made from sheet plastic. The new webbing strap is .005" styrene. There should be a small panel behind the mantlet (B40) and the turret roof; I made one from sheet plastic and added hinge detail.

The two projections on parts B40 and B26 are attachment lugs for a searchlight; each should have a small hole drilled through it near the end. Part B25 is a flash suppressor for the coaxial machine gun and should be hollowed out. The flash suppressor has a noticeable star-shaped pattern inside the tube, which I added with thin stretched sprue. The muzzle reference system on part B24 is crude, so I replaced it with sprue and plastic sheet. Note that the top portion of the muzzle reference system is canted slightly to the right, since it is optically aligned with the gunner's sight.

On the back of part B41 are several attachment brackets for a web net for stowing personal gear. These brackets are small rings, so I used tiny model railroad lift rings for them, and made webbing from thin strips of aluminum foil. Part B41 also lacks the small bracket that locks the meteorological sensor (B53) when it is folded down to the right.

I used the end fittings from the kit tow cable (A4), but substituted braided lead wire for the cable. I bought the fine lead wire at a fishing store, where it is sold for weighting handmade fishing flies. Available in various thicknesses, this material is handy for all sorts of small-diameter wiring and cabling on armor models (I also used it to build up the base of a new antenna on the left turret rear).

To braid the lead wire into cable, I cut three strands about a foot long, clamping one end of each into the collet of my Dremel motor tool. With the speed control at the slowest setting possible, I held the other end of the lead wires and turned on the tool. This procedure slowly braided the wire much more evenly than I could have done by hand. Another advantage of using lead wire to simulate cable is that it is the same color as the real thing. I added new U-shaped brackets to the turret, as well as the other cable fittings.

## CHAIN - CHAIN - CHAIN SEVEN SIZES

Glass Straight Wire Sheet Metal  
Brass & Nylon Screen Barrels  
Dry Transfer Alphabets & Stripes

Catalog #4-A - \$2.00



**Clover House**

Post Office Box 62D  
Sebastopol, California 95472

## GREAT PRODUCTS

### TO MAKE YOU A GREAT MODELER

Have you ever wished you could finish your model car or truck and have the chrome *look* like chrome? You've tried *everything* but it *still* looks like paint. **BARE-METAL FOIL** is "the Answer to a modeler's prayers". It is an ultra thin adhesive-backed foil that will conform to all compound curves. You can do the window frames, rocker panels, door handles, key holes, wiper arms, everything. It **LOOKS** like metal because it **IS** metal. Great for natural metal a/c too.

**BARE-METAL** has been written up in countless articles. You owe it to yourself to try it. **Warning!** **BARE-METAL** is habit forming and may cause endless hours of pleasure. 6" x 11" sheet, \$3.50. Postage & handling: \$.60 1st sheet, \$.30 each additional sheet.

**BARE-METAL** plastic polish, world's best, \$2.00. Postage & handling, \$.60 1st bottle, \$.30 each additional bottle.

(Separate postage for different items.)

Dealer Inquiries Invited

**BARE METAL FOIL CO.**

P.O. Box 82

Farmington, MI 48024

## Museum Quality Miniatures



Creators of historical miniatures for museums and collectors for over 30 years. Look for our "Ragtag Drummerboy" at your local hobby supplier. Our complete Catalog 155, fully illustrated with photos of our 54 mm and 76 mm kits, is available direct from us for \$3.00.

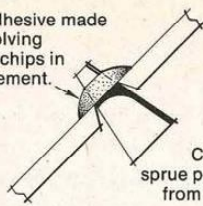
**I/R MINIATURES, INC.**

P.O. BOX 89, Dept. M

Burnt Hills, NY 12027, U.S.A.



Filler-adhesive made by dissolving styrene chips in liquid cement.



Cone-shaped sprue plug inserted from inside tank.

When filler has dried completely, slice off filler and end of plug flush with surface.

**Fig. 4** PLUGGING TURRET HOLES

**Hull details.** Next, work on the hull. I spent the most time rebuilding the rear engine exhaust gratings on part B45. The grilles provided on the kit are just covers over the real vent gratings. Also, the basic shape of this assembly has been simplified and lacks the pronounced undercut of the real tank. Start by removing most of the grille assembly from part B45, Fig. 5. Do this carefully, since the grille detail will be used later.

Next cut the grilles free from all the surrounding material. Use a fresh razor saw blade, cutting as close to the surface as possible while trying to keep all three grilles the same thickness. Once the grilles are free, sand their backs until the recessed areas between the bars are nearly transparent, then cut out all the rectangular openings between the bars using a brand new No. 11 X-acto blade. This requires great care, but the resulting grilles are nice and delicate.

Put the modified grilles aside and build a new exhaust vent assembly from sheet plastic. The simple, boxlike structures are .020" sheet and the slats are Evergreen\* .010" x 1/4" styrene strips (No. 109).

While working on the vent assembly, I also cut off the two rear light assemblies to rework them and add the small rectangular openings in the light cov-

\*Evergreen Scale Models, 1414-127th Place N.E., Suite 107, Bellevue, WA 98005.

ers (omitted in the kit). I removed the rear lights from the light covers, then used a steel burr in a Dremel motor tool to cut out the semicircular rear red lights so I could insert an M. V. Products red lens later on. This done, the light assemblies were reattached to the rear hull plate.

**Final details and assembly.** Final detailing included adding new hinges to the rear in place of the kit parts (B14, 15) which are too simple and lumpy. I also removed the hinges from parts B12 and B13 and replaced them with sheet plastic. The towing hooks on the lower portion of part B45 were drilled out, as were those on the lower front hull.

Before attaching the superstructure (C1) to the hull, cut out the rectangular and circular openings on the left side of the hull. Back up the rectangular opening with sheet plastic and add a fire extinguisher handle. The detail photos of the real tank also show the hinges and attachment points on the side armor skirts. The kit simplifies these, so you might want to add small details here as well.

I bored out the front headlights (A5) so I could insert M. V. Products lenses after painting. I also cut off the handles on the hull stowage boxes and replaced them with handles from the Italeri M47 kit. I did not glue on the driver's hatch, since I needed access to insert the plexiglass periscopes after the model had been painted.

I made two minor modifications not shown on the scale drawings. First, I added a pyrotechnic firing simulator above the gun barrel. This was made from aluminum tubing and sheet plastic. Second, I removed the rear armor skirts. In the field these are sometimes left off to gain access to the drive sprocket and to prevent mud from building up on it. If you leave off the rear panels, be sure to cut the four oval lightening holes in the inner walls of the drive sprocket.

**Painting and weathering.** I finished

my M1 in the MERDC summer verdant scheme. Testors has the four required colors in its new Model Master series: Dark Green (FS 34079), Interior Green (FS 34151), Radome Tan (FS 33613), and Flat Black (FS 37038). The official pattern is accurately portrayed on the Tamiya instruction sheet. I added "Blue Army" summer maneuver markings on the turret front. These large temporary insignia are sometimes attached with masking tape, which is the way they are shown on my model.

I weathered my M1 heavily, as the Abrams tends to get very dirty when traveling cross-country at high speed. I started by lightly covering the whole model with a thin wash of dirt-colored Polly S (I like PCA 530 Field Drab for dark schemes like this one). I mucked up the engine deck with watercolor oil and fuel stains, then streaked the lower portions of the tank using various shades of artist's gouache. Gouache (also called casein) is a tube watercolor which dries matte and is more opaque than common watercolor. It also blends well, so is good for dirt effects.

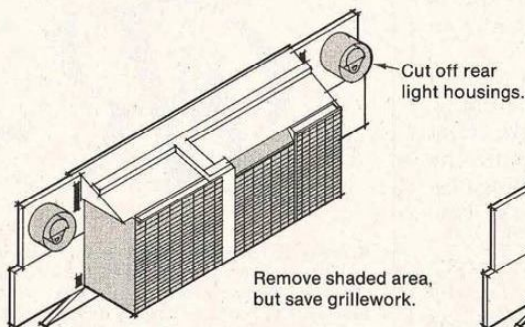
My last step in weathering was to add texture to the grime. Even in average soil conditions tanks build up heavy accumulations of packed dirt, which I modeled with a mixture of Testors body putty, rubbing alcohol, and Polly S paint. Squeeze some putty on a mixing palette, and using a cheap brush, mix in small quantities of rubbing alcohol and dark brown Polly S to make a mud-like mixture. I sometimes add fine grass-green string or yarn fibers after the paint has been stirred in to give the look of chunks of turf.

Before applying the mud mixture to wheels, track, or hull parts, give the areas where it will be applied a light wash of rubbing alcohol. This prepares the surface, and also allows a certain amount of the mud color to flow into the surface near the blobs, giving a more subtle and realistic appearance. (I strongly recommend that you try this technique on an old model before attempting it on your latest masterpiece.)

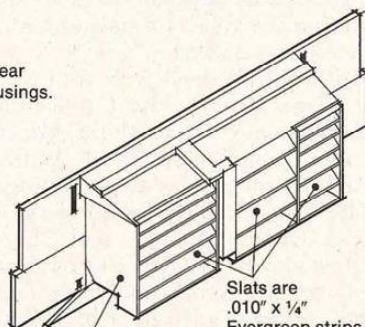
The main trick in making this technique work is using dark Polly S. The mixture of paint and putty invariably dries much lighter than it looks when damp, and if you are not careful, the mud will dry much too light and make your tank look like it's just been driven through a limestone quarry.

My M1 took me about 50 hours to build and detail, and it won a first place at the 1983 IPMS Noreastcon regional. If you haven't tried this kind of project before, you'll find it's very satisfying to look at the completed model and know that some of the fine detail is due to your efforts and not to the skill of the moldmakers. Good luck on your 1/35 scale M1!

**FSM**



Remove shaded area, but save grillework.



Build up box structures from .020" styrene.

Slats are .010" x 1/4" Evergreen strips.

**Fig. 5** REWORKING THE ENGINE GRATINGS



In Business 19 Years  
Serving the San Francisco  
Bay Area

★ ★ AMERICAS LARGEST HOBBY SHOP ★ ★

## SAN ANTONIO HOBBY SHOP, INC.

■ HUGE BOOK AND MAGAZINE SELECTION ■ AIR  
BRUSHES, TOOLS, DECALS ■ VACUFORMS, DIE CAST  
CARS ■ TRAINS — LGB, LIONEL, HO, N, Z GAUGE ■ R/C  
AIRCRAFT, BOATS, CARS, HELICOPTERS ■ DOMESTIC AND  
FOREIGN AIRCRAFT, SHIPS, ARMOR KITS, CARS

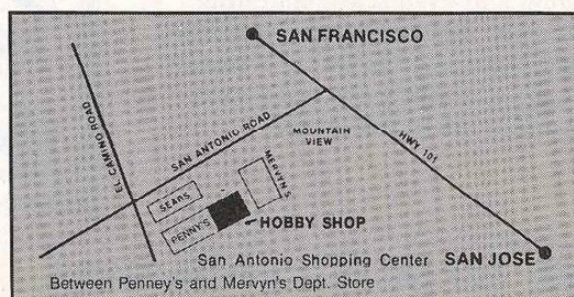
✓ **LARGE, WELL-STOCKED**  
✓ **WORTH THE TRIP!**

HOURS — Mon. thru Sat. 9:30-5:30

Thurs. night till 9:00

2550 West El Camino, Mtn. View CA. 94040

(415) 941-1278



## *“One of the things that makes model building so enjoyable!”*

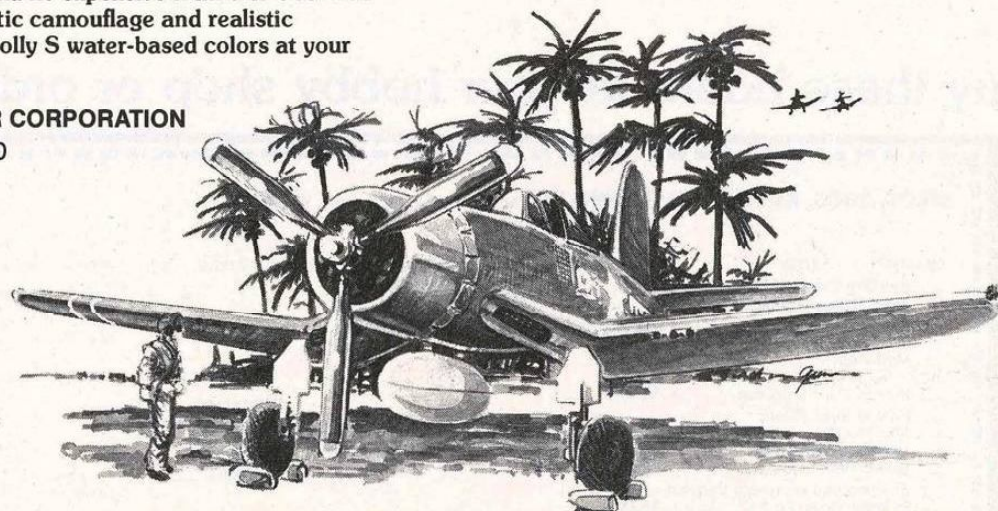
After you've spent hours assembling your model, be sure the  
paints you use live up to the quality of your workmanship.  
Whether you're a beginner or a pro... Polly S is the answer.

Polly S water-based colors provide smooth, even coverage that  
sticks to polystyrene like a second skin. Brushes clean with plain  
water. No fumes, no odors and no expensive thinners. Over 100  
colors: general flats, authentic camouflage and realistic  
weathering colors. Ask for Polly S water-based colors at your  
favorite dealer.

FLOQUIL-POLLY S COLOR CORPORATION

Amsterdam, New York 12010

an RPM company

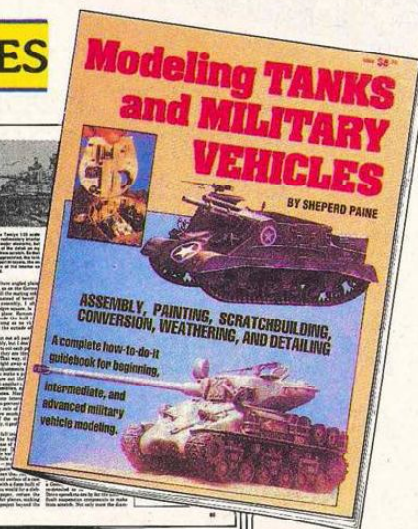




# These books — from the publishers of FINESCALE MODELER — will answer your scale modeling questions!

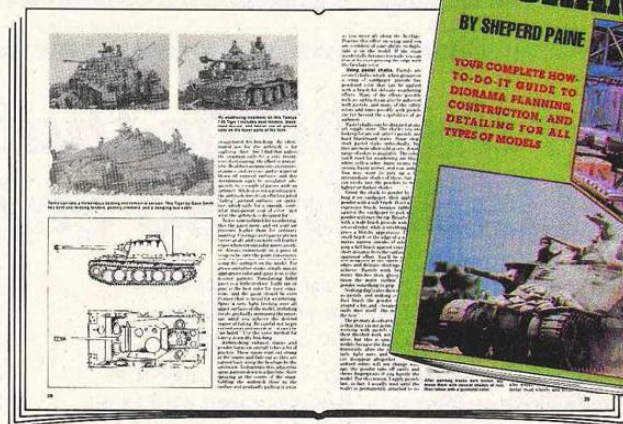
## MODELING TANKS AND MILITARY VEHICLES

In this superb book, Sheperd Paine will teach you how to build accurate, realistic armor models. Paine explains basic modeling techniques such as kit assembly and painting, then progresses to kit conversions, weathering, detailing, and even scratchbuilding! Step-by-step instructions for building an Opel Maultier, Horch 4 x 4, Super Sherman, and M25 tank transporter are included. 76 pages. \$8.95



## HOW TO BUILD DIORAMAS

This book is for you — whether you model aircraft or armor, ships or figures! In 104 pages, Sheperd Paine will show you how to design and build realistic dioramas — from the ground up! With the aid of photos and drawings, Paine offers you tips on weathering, reveals his techniques for converting and painting figures, and explains methods of shadow box construction and lighting! \$8.95



Buy these books at your hobby shop or order direct today!

DEPT. 3865, KALMBACH BOOKS, 1027 N. Seventh St., Milwaukee, WI 53233

QUANTITY	TITLE	PRICE
—	Building Plastic Models .....	\$4.75
—	Famous Spaceships of Fact and Fantasy .....	\$8.50
—	Hints and Tips for Plastic Modeling .....	\$3.95
—	How to Build Dioramas .....	\$8.95
—	How to Build Plastic Ship Models .....	\$6.25
—	Modeling Tanks and Military Vehicles .....	\$8.95
—	Building and Improving Vacuum-Formed Model Aircraft .....	\$6.25
—	World War Two Jet Fighters .....	\$8.50
	<b>Subtotal</b> .....	

Please send me the books I've marked.

- ☐ My check is enclosed  
☐ This is a credit card purchase (see below)

**Subtotal** .....

Postage and handling: U. S., \$1; foreign \$1.50 (per order); Wisconsin residents add 5 per cent sales tax

**TOTAL** .....

If you don't wish to clip your magazine, copy the necessary information including department number on a separate sheet. Prices subject to change.  
 ©1984 KALMBACH PUBLISHING CO.

Name .....

Street .....

City .....

State, Zip .....

☐ MASTERCARD

Charge to: ☐ VISA Exp. Date .....

Card Number .....

Signature .....



## IROQUOIS WARRIOR, FRENCH AND INDIAN WAR

BY R. J. STAFFORD  
ARTWORK BY THE AUTHOR

**A** GENERATION BEFORE European colonists came to the area in numbers, the lands south of Lake Ontario were occupied by the Iroquoian-speaking peoples of the Five Nations: from east to west, the Mohawks, Oneidas, Onondagas, Cayugas, and Senecas. With the adoption of the Tuscaroras in 1722 the Iroquois became the Six Nations.

The Iroquois lived in stockade villages built on defensible sites. From the earliest age Iroquoian males were trained in warfare, and the Confederacy conducted successful campaigns against all its Indian neighbors.

Both French and British attempted to woo the powerful Iroquois Confederacy to their side in their colonial wars. In the French and Indian War (1754-1763), the Confederacy attempted to maintain neutrality. Finally, after British victories at Louisbourg, Fort Frontenac, and Fort Duquesne in 1758, plus the increased availability of British trading goods by 1759, the tribes of the Iroquois Confederacy had little choice but to ally themselves with the British.

The Iroquois warrior shown is typical of the period — the old notion of "naked savages" is simply not true; in fact, the Iroquois began to wear the same clothing as the whites whenever they could. This man wears leggings made from broadcloth, an article of clothing often adopted by both British and French. His headpiece is a copper band sewn over a red skullcap adorned with turkey feathers. The two upright feathers signify that he is a member of the Onondagas, the nation that lived in the area between present-day Syracuse and Owasco Lake in upstate New York.

The warrior wears a white man's linen shirt adorned with brass either traded for or taken in combat. The weapon is a trade musket. Whether made at home or obtained in trading,

the bag carried on the hip was often richly adorned, either by the warrior himself or his woman. Under his sash on the right side is a scalp.

The white and black face markings signify his preparedness for war. The hair is worn long. The popular conception of Iroquois warriors having shaven heads is only partly true. Such styling was a matter of individual choice, and some whites who adopted Indian ways shaved their heads.

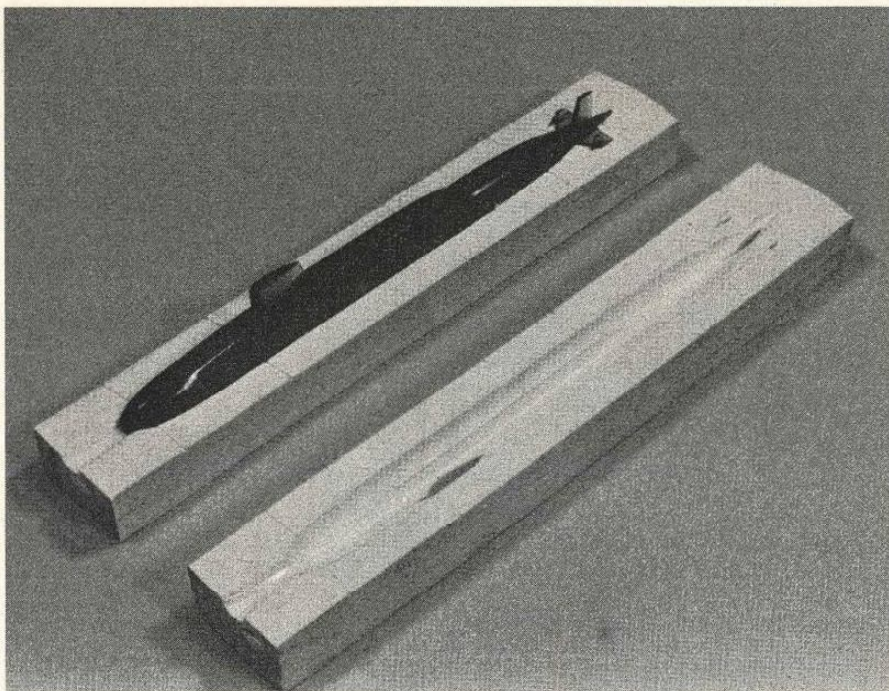
FSM



### REFERENCES

- Eckert, Allan W., *The Wilderness War: A Narrative*, Little, Brown & Company, Boston, 1978.
- Graymont, Barbara, *Iroquois in the American Revolution*, Syracuse University Press, 1972.
- Utley, Robert M. and Wilcomb E. Washburn, *The American Heritage History of the Indian Wars*, American Heritage Publishing Co., New York, 1977.





David casts epoxy resin in RTV silicone rubber molds. The hull of this foot-long submarine is cast in one piece and small details are attached later.

## Casting resin parts in RTV molds

An easy way to reproduce hard-to-make scratchbuilt parts

BY DAVID MERRIMAN

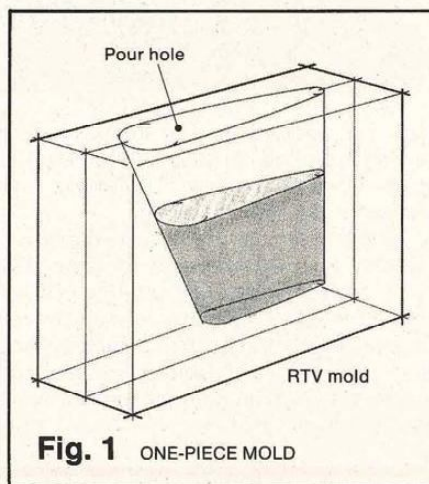
ANYONE WHO HAS slapped model kits together for a while, especially a scratchbuilder, eventually needs a way to mass-produce an intricate original part. Like any technique, resin casting in RTV molds suits itself to specific situations. Used correctly, it saves many frustrating hours of repetitious work. I cringe at the thought of scratchbuilding an item more than once, so I use this method to reproduce 12"-long submarine models for defense contractors and military associations.

I have to make many duplicate models, so I appreciate the virtues of resin casting. When I receive a repeat order, I simply pull the molds off the shelf and cast everything with one batch of resin. About 20 cast parts can be poured, cured, finished, sanded, and painted in six hours! If I had to build each part from scratch (using block and sheet plastic), I would have to burn up nearly 30 hours.

Cast resin parts are strong, easily

machined, inexpensive, and many can be made from one mold. However, they are relatively heavy and difficult to produce in thin sections (thin walled items are better produced by vacuum-forming plastics).

**Making RTV molds.** I make molds



using RTV (room temperature vulcanizing) silicone rubber, a smooth, nearly chemically inert material which, in its liquid state, can be poured around any pattern. When cured, RTV is easily removed from the original and flexible enough to bend away from negative drafts (undercuts) in complex shapes.

RTV generates little heat as it cures. Both General Electric and Dow Corning RTVs have a choice of slow or fast cure catalysts; I usually choose the slow cure to allow enough time for any bubbles trapped during mixing to escape.

Now, the bad news: RTV is expensive, but its many advantages outweigh its cost. In terms of time saved (and time is money), I always wind up ahead of the game using RTV.

I use three types of molds to cast parts. The simplest is the one-piece, open mold, Fig. 1. An open mold is the easiest to make and is ideal for simple patterns. The widest side usually serves as the opening through which the resin is poured. The patterns and subsequent castings pop out easily, Fig. 2; even items with modest undercuts can be coaxied out by flexing the mold. RTV will take a lot of stretching before it tears and even when torn, it returns to its original shape and hides the tear.

First, I attach the pattern to a firm base and build a mold box of .030" styrene around the pattern. After the box is set, I pour enough RTV into the box to completely cover the pattern and allow it to cure. When cured, the mold box is torn away and the pattern removed from the mold.

A closed mold, Fig. 3, is needed when a more complicated form is to be molded. The pattern must be suspended in the mold box so that the molding material can completely surround it. I run dowels from the pattern to the walls of the mold box. After the mold has cured, I peel away the mold box and pull out the dowels. Now I have an RTV block with the pattern buried inside. To remove the mold, I cut it in half using the dowel holes as markers along the separation line.

The separation line doesn't have to be straight; in fact it's better if it's uneven so that when the mold halves are joined for casting, they will key into each other to ensure good alignment, Fig. 4.

Figure 5 shows the third type of mold I use. This two-part mold allows casting parts that have small areas that would be impossible to cast by the gravity-feed method used in the other two molds. This mold is for an old-style fluked anchor, and features a built-in reservoir, sprues, and air vent channels. When the anchor is cast, the resin fills the mold from the bottom and the displaced air flows out of the



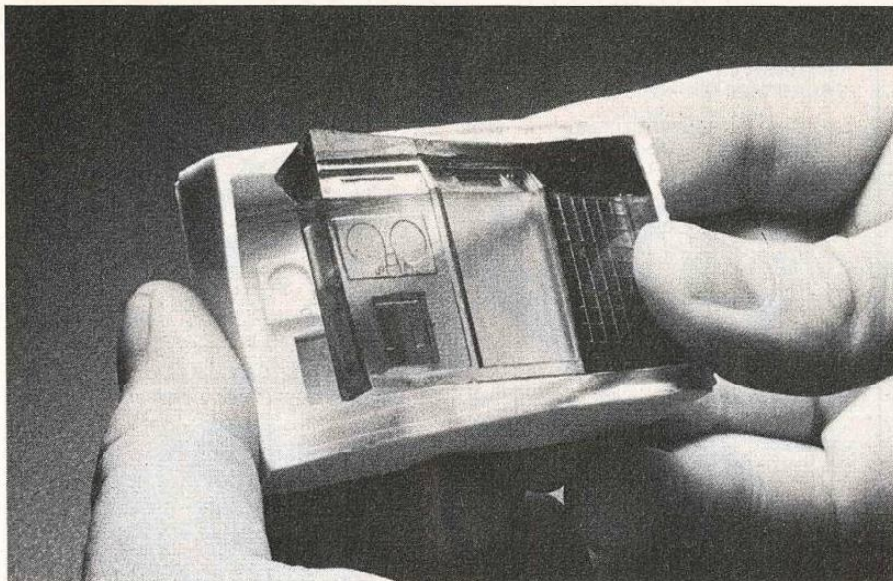


Fig. 2. This relatively flat computer panel pops easily out of its one-piece RTV mold.

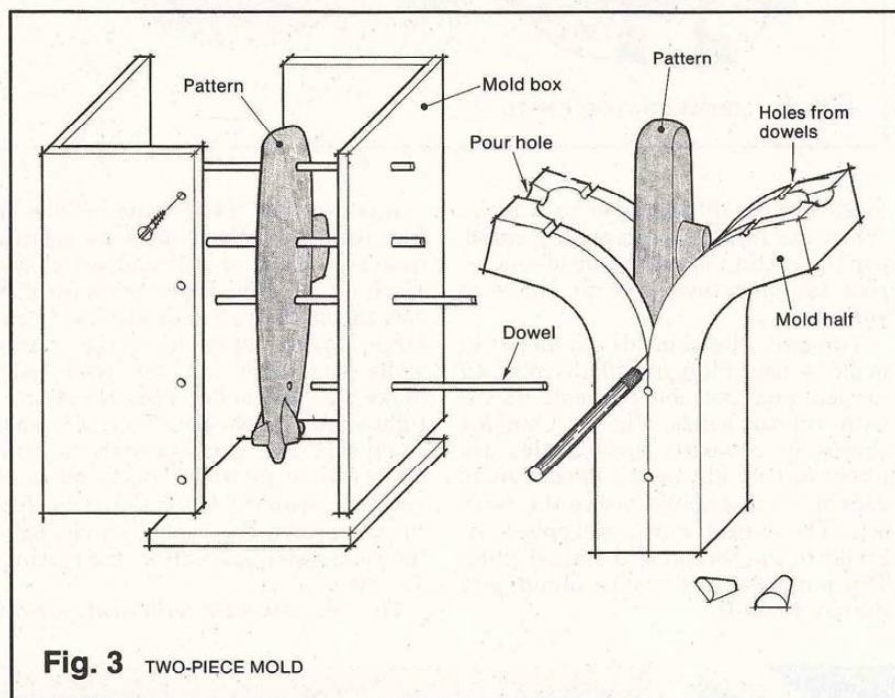


Fig. 3 TWO-PIECE MOLD

vents at the top, eliminating bubbles.

The major factor in designing this type of mold is that the volume of the reservoir must be greater than the combined volumes of the casting cavity, sprue, and vent channels; twice the volume wouldn't hurt.

Sometimes I'm faced with a pattern that cannot be removed easily from a two-piece mold. Take a ship's propeller (screw), for example: Note that the complicated shape makes it impossible to remove the pattern without damaging the mold. With shapes like these, I make the molds one half at a time, Fig. 6.

The pattern shown is a fast attack submarine screw. First, I covered the rear portion of the screw and blade

faces with modeling clay and secured small wires to the tips of each blade to act as vent channels in the completed mold. The shaft extending from the rear of the hub acts as the reservoir in the mold.

To make the first mold half, I made a circular mold box and poured RTV over the exposed portions of the screw. After the RTV cured, I removed the clay, exposing the inside faces of the pattern. Next, I coated the cured RTV face with Vaseline to prevent the second half of the mold from sticking to it. Again a mold box was built up and RTV was poured over the rest of the screw. After this half had cured, I separated the mold halves and removed the pattern, Fig. 7.

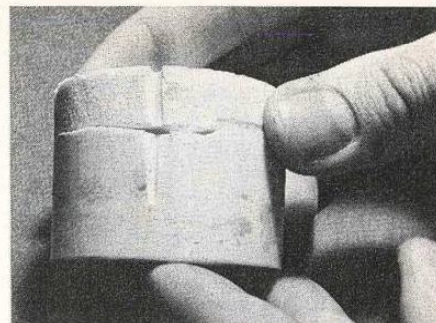


Fig. 4. The separation line of two-part molds can be ragged to help ensure alignment of the mold halves.

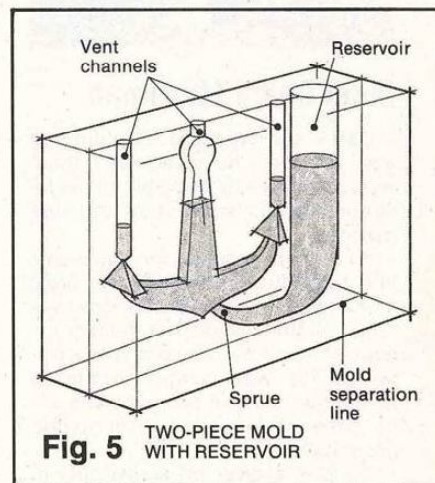


Fig. 5 TWO-PIECE MOLD WITH RESERVOIR

**Casting resins.** Two types of casting resins can be used to make parts: polyester and epoxy. Polyester resin is the familiar resin component of glass-reinforced plastics and can be found in craft stores. The rate of cure of both polyester and epoxy resins depends on the amount of catalyst added. Polyester resin shrinks more than epoxy, an important consideration in large-volume casting. Epoxy resin's shrinkage is almost nil, but it is more expensive than polyester.

Shrinkage in large polyester resin castings can be greatly reduced by adding micro-balloons (tiny, sand-like phenolic spheres) to the resin. Another way is to place a wooden or plastic plug into the mold cavity before pouring the resin, Fig. 8. The plug can fill as much as 75 percent of the mold cavity, resulting in a lighter casting with less shrinkage.

Since shrinkage is not a major problem with small volume pours, a large mold can be filled by several small pours instead of one large one, allowing each pour to cure before adding the next. When the resin cures it creates heat and becomes brittle. Pouring the resin in small volumes produces a casting that is less brittle and closer to the size of the original.

**Casting in RTV.** Prepare whatever





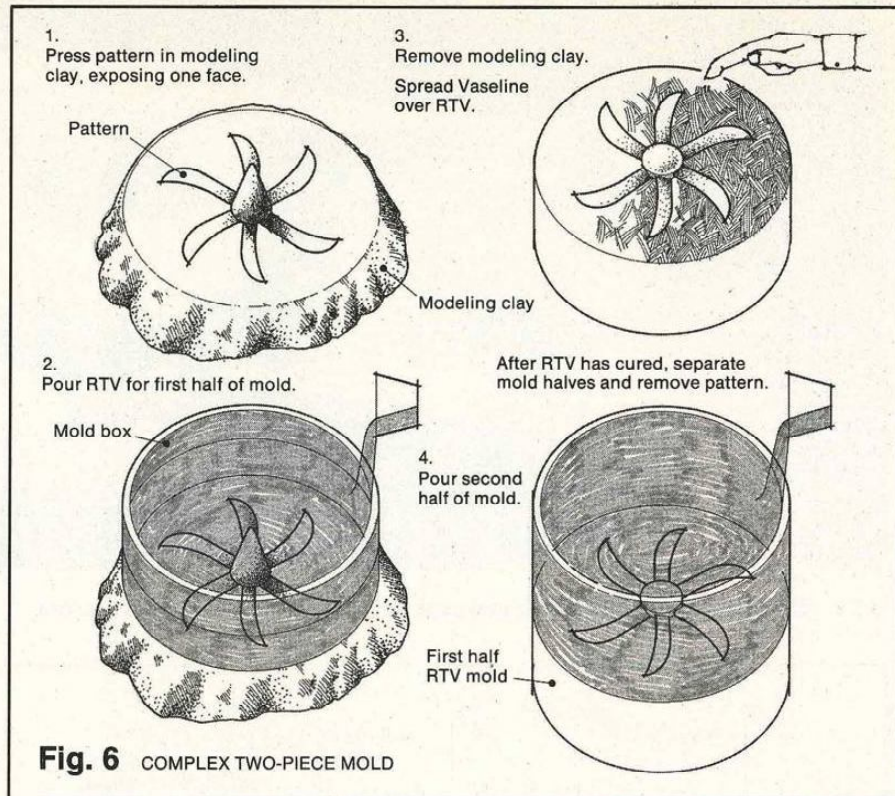
## Meet David Merriman

David started scratchbuilding at age 10 when he discovered there weren't many kits available of his favorite subjects: spaceships and submarines.

He's built models for museums and individual collectors, but most of his work is for defense contractors, building desktop models for executives as well as company giveaways. This work ranges from tanks to submarines, but some models are of "paper studies" that never go into production.

David is a diver on active duty in the U. S. Navy, inspecting and repairing ships underwater at Norfolk, Virginia. He models in his spare time, and he hopes to continue building professionally after he retires from the Navy.

resin you choose according to the manufacturer's instructions. I recommend using polyester casting resin outdoors or in a well-ventilated garage. Castings in open molds are the easiest to



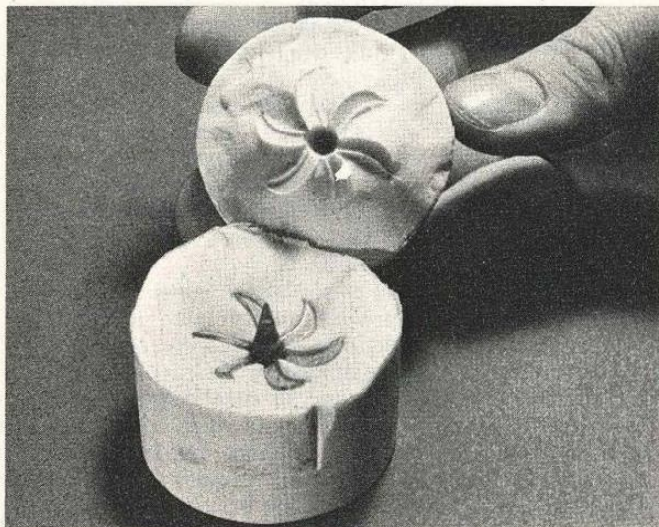
**Fig. 6** COMPLEX TWO-PIECE MOLD

make; simply fill the mold with resin. When the resin has thoroughly cured, pop the casting out of the mold and repeat the operation as many times as you need.

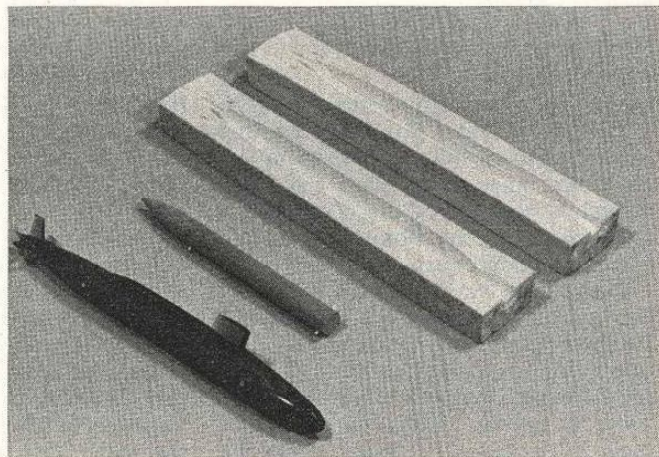
Two-part, closed molds are more difficult to use. First install the plug (if needed) and assemble the mold halves with rubber bands, Fig. 9. Complex shapes in two-part, closed molds are likely to trap air, so it's important to get rid of any bubbles before the resin sets. The easiest way is to apply a vibrator to the bottom of the filled mold. This jars loose any bubbles clinging to the cavity walls.

Another way to eliminate bubbles in the resin is to place a vacuum cleaner hose over the pour hole and switch the machine on. The lower pressure outside the mold causes the bubbles to enlarge, break away from the cavity walls, and float out the pour hole. Make sure the mold is completely airtight except for the pour hole; if it isn't, you'll suck the resin out with the bubbles (with disastrous effects on your vacuum cleaner)! Once the resin has cured, remove the rubber bands, split the mold apart, and extract the casting, Fig. 10.

The two-part mold with the reservoir



**Fig. 7.** This sub screw mold was made one half at a time.



**Fig. 8.** The wooden plug is placed in the mold before the resin is poured. The plug (which remains inside the casting) decreases the amount of expensive resin needed to fill the mold, decreases weight, and lessens shrinkage.



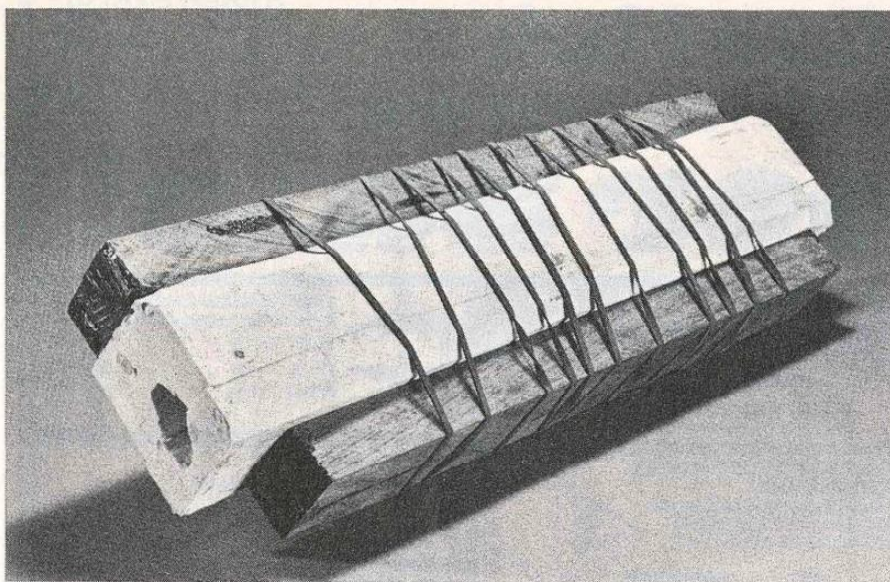


Fig. 9. Blocks and rubber bands hold this two-piece mold together while the resin cures.

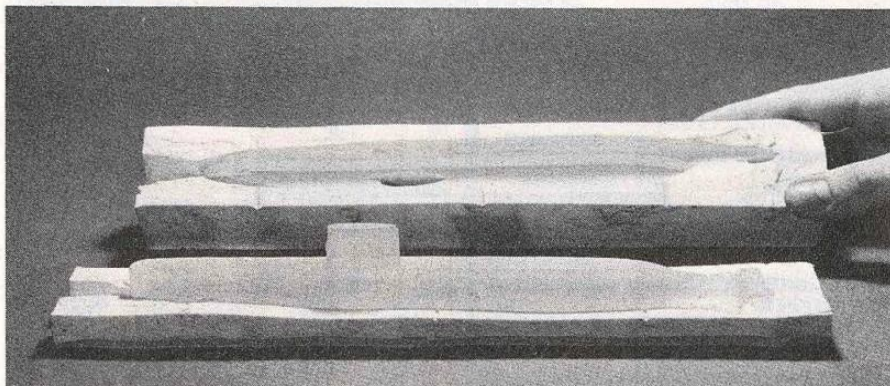


Fig. 10. After the resin has cured, the mold is opened and the casting removed.

is the trickiest of all. The resin poured into the reservoir flows through the sprues into the various branches of the cavity, displacing air through the vent holes. Occasionally, you'll need to help the air out of the mold by placing a soda straw over each vent and applying suction. Each vent should overflow slightly. Replenish the resin in the reservoir as required, making sure it remains full; otherwise, the resin in the cavity will back into the reservoir.

**Finishing the castings.** The biggest chore in finishing is to remove excess cured resin from the castings. Cut off the sprues and sand off the flash on the mold seams with 400-grit sandpaper. Next, use 000 steel wool to buff the parts smooth. As far as drilling, grinding, and other machining, cast polyester and epoxy have nearly the same characteristics as acrylics. Drilling should be done with care to avoid chipping the surface.

Many types of adhesive can be used to join cast parts to themselves or to other materials. I find that a mixture of super glue and micro-balloons is best.

However you approach it, resin casting in RTV molds saves time and ensures uniformity when making duplicate items. Now go out there and get your fingers sticky! **FSM**

#### SOURCES

##### RTV rubber molding material:

Silicones RTV .11: General Electric Company, Silicone Products Division, RTV Products Department, Waterford, NY 12188.

Silastic E RTV Silicone Rubber: Dow Corning Corporation, Midland, MI 48640.

##### Epoxy casting resins:

Epon 828 Epoxy: Read Plastic, Inc., 12331 Wilkins Avenue, Rockville, MD 20852.

Shell Epon Epoxy: E. V. Roberts and Assoc., 8500 Steller Drive, Culver City, CA 90230.

**FRICKO PINHOLE LENS with COLENS**

- Contains our new colens which provides:
  - a SHARPER IMAGE.
  - a SHORTER EXPOSURE TIME.
  - a BRIGHTER VIEWING SCREEN.
  - a TREMENDOUS DEPTH OF FIELD.
- For miniature photos, gives perspective of a scale man, photos can be taken looking up at models, perfect focus of foreground and background, no vertical line distortion, makes models look real.
- Works on manual exposure or on automatic aperture preferred cameras. Can use any 35mm film, can shoot indoors or outdoors, with or without flash.
- Available for 35mm SLR cameras: CANON, KONICA, MINOLTA, NIKON, OLYMPUS, PENTAX K, PENTAX S, YASHICA, CONTAX, MAMIYA.
- \$34.95 each

Send SASE for information.  
Order direct or your dealer can get it from Walthers.  
**A. J. Fricko Co.,**  
P.O. Box 43276, Cincinnati, OH 45243-0276

**Bunbar Miniatures**  
3 Bywood Lane  
Trenton, N.J. 08628

Selection - Quality - Service  
20 YEARS EXPERIENCE

Finest Military Figures  
for the serious hobbyist  
54mm - 154mm

- PERSONALLY SELECTED -
- MAJOR MANUFACTURERS -
- LARGE CURRENT INVENTORY -

Discount Price List

SEND \$2 FOR DESCRIPTIVE LISTINGS  
REFUNDABLE WITH FIRST ORDER



## Paul Freiler's HISTORICAL MODELS

19510 Hawthorne Blvd  
Torrance, California 90503  
(213) 542-6391

Hours: Mon-Sat 10-9, Sun and Holidays 11-6

#### SPECIALIZING IN PLASTIC KITS

- Aircraft
- Armor
- Automobile
- Ships

#### TOOLS

- Unimat
- X-acto
- Dremel
- Paasche

#### GAMES

- Software
- D&D
- Strategy
- RPG

#### BOOKS

- Aircraft
- Ships
- Automobile
- Armor

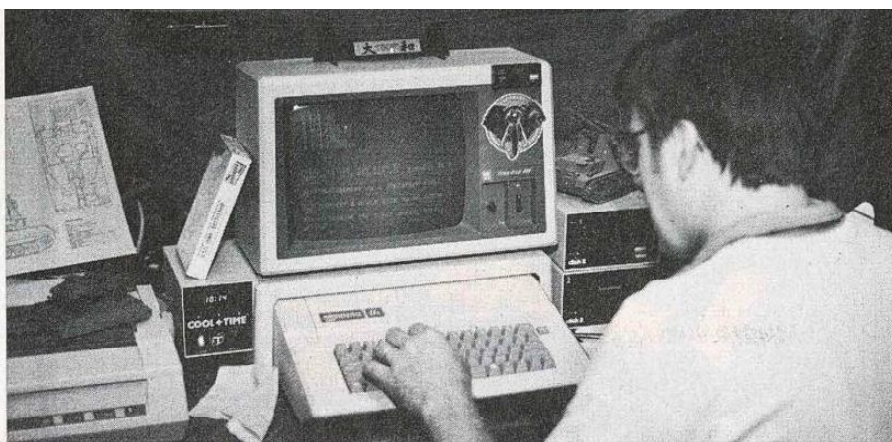
#### ALL MAJOR MODELS AND MAGAZINES—BOTH FOREIGN AND DOMESTIC

- MICROSCALE, SCALE MASTER, ATP, FOWLER, ETC. DECALS
- POLLY S, FLOQUIL, HUMBROL, PACTRA, TESTORS, TAMIYA, PAINTS
- HO TRAINS AND ACCESSORIES









The author hard at work combining two of his hobbies — using an Apple IIe home computer to simplify the mathematical side of modeling.

# A computer scale converter

Don't rush out to buy a computer just to run this program, but if you already own one . . .

BY DAVID CHEVALIER

**W**HY NOT put a computer to work for you, converting measurements from one scale to another, determining oddball scales, and verifying hard-to-figure scale dimensions on your models? I thought for a long time how I might merge two of my hobbies by somehow applying my home computer to modeling. Here's the first result.

Remembering the confusion I usually have to go through when I try to calculate scale measurements, I developed (with some help from a fellow modeler) a simple mathematical program to remember the formulas and to do the calculating for me. The program,

which you can keyboard into your home computer, is shown in the listing.

So, what can this little program do for you? First, it's a general program, not tied to any particular scale or variety of modeling. You enter the scales, so the program works with any scale or combination of scales you encounter. The program converts all real measurements to inches, then scales them. Real (full size) measurements are shown in feet and inches; scale measurements are shown only in inches.

**Using the program.** The "Convert" function (menu choice C) converts real (full size) dimensions to measurements in the scale you enter. This is handy for finding how true to scale a kit is. It is

also good for placing pitot tubes, drive sprockets, mufflers, or whatever exactly where they belong when you have drawings that show full-size measurements, particularly on vacuum-formed models.

"Find actual size" (choice F) takes dimensions from your model and calculates their full-size equivalents. Be careful with this function — kits aren't always exactly the scale they claim to be on the box.

"Determine scale" (choice D) calculates the exact scale of a kit based on measurements of the model and actual (full size) dimensions from the real thing. This is particularly useful on some of the older, "fit-the-box" kits issued in the early days of modeling.

Finally, "Convert between scales" (choice S) converts a dimension from one scale to another, for example, from 1/72 to 1/48, 1/144 to 1/32, and so on. This is especially handy when you have plans in one scale but are modeling in another.

The functions can be used together. For example, you can use the "Determine scale" function to calculate the scale of a photograph (be careful — photos include perspective distortion), then use that scale and measurements from the photo with the "Convert between scales" function to calculate dimensions for your model.

The program is in the BASIC computer language. It was first written on a Radio Shack TRS-80 Model II, and has been run on a Commodore 64 and an Apple IIe. The version shown in the listing is for the Apple, and you may have to make one or two minor changes to run the program on your machine. After you've used the program you'll probably come up with useful additions of your own, and if you do, I'd like to hear about them. Write to me in care of FINESCALE MODELER. **FSM**

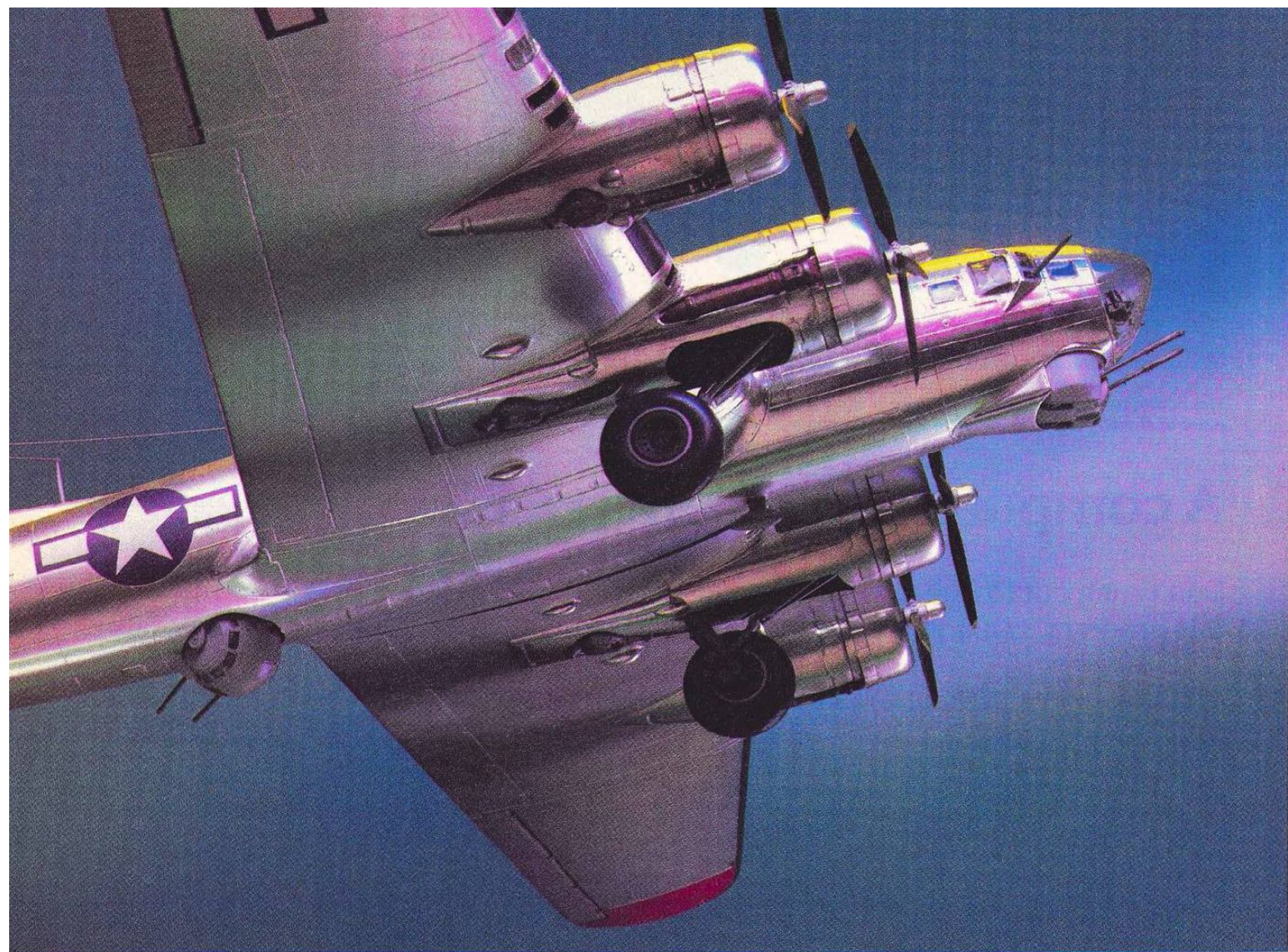
## Program Listing

```

10 REM --SCALE CONVERSION PROGRAM
20 HOME : PRINT "THIS PROGRAM WILL CONVERT AN ACTUAL"
21 PRINT "MEASUREMENT TO A SPECIFIED SCALE, OR"
22 PRINT "CONVERT A SCALE SIZE TO AN ACTUAL SIZE,"
23 PRINT "DETERMINE THE SCALE OF A MODEL,"
24 PRINT "OR CONVERT FROM ONE SCALE TO ANOTHER."
30 PRINT : PRINT
50 PRINT "WHenever THE PROGRAM REQUESTS A SCALE, "
51 PRINT "ENTER ONLY THE BOTTOM NUMBER."
52 PRINT " FOR EXAMPLE, FOR 1/48 SCALE ENTER"
53 PRINT " ONLY '48."
60 PRINT : PRINT
70 PRINT "COMMAND MENU:"
71 PRINT "  CONVERT = C"
72 PRINT "  FIND ACTUAL SIZE = F"
73 PRINT "  DETERMINE SCALE = D"
80 PRINT "  CONVERT BETWEEN SCALES = S"
81 PRINT :
90 PRINT "WHICH WOULD YOU LIKE TO DO?": INPUT A$
100 IF A$ = "C" THEN 150
110 IF A$ = "F" THEN 200
120 IF A$ = "D" THEN 250
130 IF A$ = "S" THEN 310
140 GOTO 70
150 REM --CONVERT ACTUAL TO SCALE
160 PRINT "SCALE": INPUT S
170 PRINT "SIZE IN FEET, INCHES (2 ITEMS)": INPUT F,I
180 S1 = ((F * 12) + I) / S
190 PRINT "SCALE SIZE IS ";S1;" INCHES": GOTO 370
200 REM --FIND ACTUAL SIZE FROM KIT
210 PRINT "SCALE": INPUT S
220 PRINT "KIT SIZE IN INCHES": INPUT I
230 AS = I * S:A1 = INT (AS / 12):A2 = AS - (A1 * 12)
240 PRINT "ACTUAL SIZE PER KIT IS ";A1;" FEET, ";A2;" INCHES": GOTO 370
250 REM --DETERMINE SCALE FROM KIT
260 PRINT "ACTUAL SIZE IN FEET, INCHES (2 ITEMS)": INPUT S1,S2
270 PRINT "KIT SIZE IN INCHES": INPUT K
280 SC = ((S1 * 12) + S2) / K:A = INT (SC):B = SC - A
290 IF B > .5 THEN SC = SC + 1
300 PRINT "SCALE IS 1:";SC; GOTO 370
310 REM --SWITCH FROM ONE SCALE TO ANOTHER
320 PRINT "ENTER SCALE YOU ARE SWITCHING FROM": INPUT S1
330 PRINT "ENTER SCALE YOU ARE SWITCHING TO": INPUT S2
340 PRINT "SIZE IN INCHES": INPUT I
350 NS = I * (S1 / S2)
360 PRINT "SIZE IN 1:";S2;" IS ";NS;" INCHES"
370 PRINT "DO YOU WISH TO CONTINUE (Y/N)": INPUT A$
380 IF A$ = "Y" THEN 70
390 IF A$ = "N" THEN 400
400 END

```









All model photos: Gerry Humbert

# Natural metal model aircraft — the easy way

It's not paint, it's not foil, it's real aluminum plate

BY DAVID W. JONES

**T**O ME, SCALE MODEL building is the quest for realism in miniature — with every attempt made to use materials and techniques which will accurately represent the shape and surface characteristics of the full-size original. Most modern aircraft are constructed of metal (largely aluminum) but it has been difficult to reproduce a real aluminum look with metallic paints because of the special application techniques required. And when the tedious job is done it still doesn't look quite the way you hoped it would.

I remember my first attempt to make a metal finish scale model back in the 1940s. It was a 1/48 scale "solid" balsa model kit of an F4F Wildcat which in-

cluded die-embossed aluminum foil panels to be glued on to represent the "real" look of metal. The concept was good, but it was difficult to get those aluminum foil pieces glued in place so they looked right.

Even today, you can do the same with aluminum foil, contact adhesive, and careful burnishing on injection-molded styrene kits. But even that technique leaves much to be desired. What we want is simply a thin layer of deposited aluminum on the model in the places where we want it.

The only thing that will really look like aluminum is aluminum itself, and this article tells you how to do just that: finish your model with honest-to-goodness, real aluminum!

**Vacuum-plating.** Recently, my friend

Monogram's 1/48 scale B-17G shows what this plating technique can do. Note exhaust stains from the superchargers air-brushed over the aluminum plate. Al Onken scratchbuilt Hamilton-Standard propellers for his otherwise stock Monogram 1/48 scale B-29. The real aluminum skin on the model makes a big difference. Complex canopy framing is plated with the fuselage. Glass areas were masked off using liquid mask. Decals are applied normally on the plated surface. Gloss red unit colors, aluminum-doped control surfaces, and olive drab anti-glare panels were painted and masked before the model was plated.

Al Onken, a first-rate, enthusiastic modeler, experimented with plating his models with aluminum. The results, as you can see from the photographs, are astonishing, and the process is easy. It takes planning and careful consideration to achieve the effects you want.

There have been attempts at plated plastic model airplane kits, but the manufacturers' efforts to texture the surface give a crude, toylike appearance, not scale-like at all. Plastic kit manufacturers who need portions of their kits plated send them to a company which specializes in vacuum-plating plastic parts. There are plenty of these companies spread around the country and they usually welcome individual plating jobs from modelers.

**Preparing the model.** Briefly, here's what you need to do. The model is completed to major subassembly level, the areas you don't want plated are painted and masked off, and the subassemblies are sent to the platers. When they return, peel off the masking tape and finish assembling the model, adding small details, decals, and weathering. Since every model is different and modelers' tastes vary, no exact procedure can be specified, but keep these thoughts in mind as you plan and build models you want to plate:

Attach complex clear plastic parts to the fuselage, use a liquid mask, and cut out the "metal" window frame outlines with a hobby knife so they get plated. It beats trying to control silver paint with a tiny brush.

Plating exaggerates the visual effects of raised panel lines so you may wish to subdue them with fine sandpaper or convert some of them to engraved lines.

Make the subassemblies as large as possible, Fig. 1, but realize that the plater can't mount a completed model in the plating chamber. Fuselages, wings, and homemade sprues of small parts are the best way to break down a model. Each part or sprue you send to the plater must have two mounting tabs firmly and rigidly attached. These tabs support the part as it rotates in



## QUESTIONS AND ANSWERS ABOUT METAL PLATING

● **Where do I find a plater?** You should be able to find a plater nearby if you live near a large metropolitan area. Look in the Yellow Pages under "Plastics — Fabricating, Finishing, and Decorating" or "Vacuum Plating." Looking through the long list of "Platers" of all types might reveal some with plastic vacuum-plating capabilities.

A phone call to the purchasing agent of a "custom" plastic injection-molding company listed in the Yellow Pages may lead you to a vacuum plater. Plastic molding companies send items out for gilding and brightwork effects as a service to their customers. Once you've found a plater, show them this article so that they understand what you want.

● **How much does it cost?** The price of this service depends on many factors, but \$10.00 to \$30.00 is a target to shoot for when shopping around. Always consider the priorities of the plating company; if they have a tight production schedule and a low profit margin, an individual dropping in with a small job might disrupt their delicate balance and they may charge more.

On the other hand, work loads vary considerably and you may discover that your work would be welcome two weeks from now when a current production run is over. Being flexible and willing to work with the plater might get you a better price.

The cost of a plating job is mostly a setup charge; the amount of plastic processed per setup has little effect on the price. Plating several models costs little or no more than one model. For instance, you might be charged \$25.00 to plate your 1/48 scale B-25, but if you brought in five B-25s masked, tabbed, and ready to go, the total cost might be only \$35.00. Now each model costs \$7.00 instead of \$25.00. This makes plating models a good club project.

● **How long do I have to wait for my model to be plated?** If you're lucky, the plater may not be busy and you could get overnight service. However, your job may have to sit on the sidelines waiting for a gap between production batches, and that could take a week or more. Ideally, the plater is a nice guy who understands your problems, and wants to

help all he can. But reality is a notch or two down from this ideal. Try to involve him in your enthusiasm for your hobby; show him some of your work or offer to build him a model of his favorite car, truck, or plane. "Greasing the skids" may get your job done a little quicker.

● **How thick is the plating?** The plating is only .0003" thick, no thicker than paint applied with an airbrush. The lacquer pre-spray is actually thicker than the plating. Keep in mind that the plating visually magnifies details such as panel lines, warps, sinkholes, and rough surfaces. The masking procedure described in the article prevents large solid color areas from having the additional thickness of the plating underneath that might diminish surface detail.

● **Is aluminum the only color available?** Aluminum seems to be the only metal commonly vacuum-plated on plastic. Gold, brass, copper, bronze, chrome, and other color effects are achieved with tinted oversprayed films.

● **Is it possible to apply paint and decals over the metal plate?** Yes, any kind of touch-up is possible and decals can be applied normally with no problems. Al Onken tells me he has several shades of aluminum paint which he lightly dusts onto panel areas for weathering and to make some panels look like they are made from duller magnesium or stained titanium. He also uses these to touch up minor defects. The upper forward fuselage of Al's B-29 wasn't completely plated and was touched up with aluminum paint.

Treat the plated surface as you would a spotlessly clean bare plastic surface. A light overspray of aluminum paint can be used to create oil streaks and exhaust stains.

(I wonder who will be the first to completely aluminum plate an aircraft model, paint over the plating, and then chip the paint off in the high-wear areas.)

● **Can the plating be toned?** I was curious to know if buffing the aluminum would brighten some panels. Al says the process is too tricky to recommend, but you might like to experiment with small buffing wheels, jeweler's rouge, and so forth. Al prefers applying a gloss

overspray, but this doesn't look right on model aircraft.

If you want a mirrorlike, chrome surface, ask the plater to do this for you; this is the usual way he completes the plating process. Some time ago, Al had a model of a stainless steel tank trailer plated this way and to say it was a standout is understatement.

It's possible to rub a dry, paint-stained cloth on the plated surface so that the color lodges in grooves and depressions. This gives tremendous depth to small, intricate items like landing gear and other bright machinery.

● **Does the plating stick only to styrene?** Vacuum plating sticks to anything that has lacquer pre-spray applied to it. This is good news for modelers who scratchbuild or extensively modify their models using lots of filler.

● **Will the plating wear off or tarnish?** It's too early to tell what the long-term effects of exposing a plated model to normal environmental contamination, oxidation, and handling will be. With our extensive handling and a few minor bumps, the two models in the photos haven't shown any wear or deterioration of the plated or painted surfaces. It seems that the unprotected plated surface is every bit as durable as a normally airbrushed surface. This goes for fingerprints, too. If you normally use gloves to handle your completed models, continue to do so with plated models. If not, don't worry. We didn't take any special handling precautions when we photographed the models and the only disaster was a detached antenna wire.

As for tarnishing, aluminum is not like silver. Oxidation on real aircraft leaves a light film of white powder, and since this powder is microscopic, it would look real on a model too. It may take 5 to 10 years for this type of oxidation to be even slightly noticeable, and if you dust your models once or twice a year it might never be noticed.

In the long haul, waxes might help retain the original appearance just as full-size aircraft owners have found. I don't know what effect salt air or oceanside breezes may have on aluminum, but a clear overcoat should prevent extreme oxidation.

David Jones

the vacuum-plating chamber. Locate the tabs on the long edge of the part and attach them with tape or glue to painted sections or areas that will not need the plating, Fig. 2.

There is some heat and physical handling involved in the plating process so use the highest quality masking materials possible and make sure the edges are pressed down firmly, Fig. 3. Since the areas to be plated are pre-sprayed with a special low-solvent lacquer that promotes adhesion of the evaporated aluminum, plan the subassemblies so that they can receive complete

coverage during the spraying process.

Use lacquer-base paints on the painted areas; they're compatible with the plating pre-spray process. If you use oil-base enamels, make sure the painted areas are thoroughly masked to keep the lacquer pre-spray from reacting with the enamels. In short, plating must not overlap oil-base paints!

Some of the smaller plated parts that will be added during final assembly can be left on the kit sprue or mounted together on a special sprue of your own construction.

**How the process works.** The plater

clamps the tabs of the subassemblies to long racks in the vacuum-plating machine, Fig. 4. These racks rotate in ferris-wheel fashion, evenly distributing the aluminum on your plastic parts. The vacuum chamber is perhaps 5 to 6 feet in diameter and 8 feet long or more, Fig. 5. It has a bar or rod down the center that holds small strips of aluminum which are heated, atomizing the aluminum into a fine vapor. The vaporized aluminum sticks only to the surfaces that have been sprayed with lacquer. This "flashing" takes but a few seconds; most of the 15-minute pump-



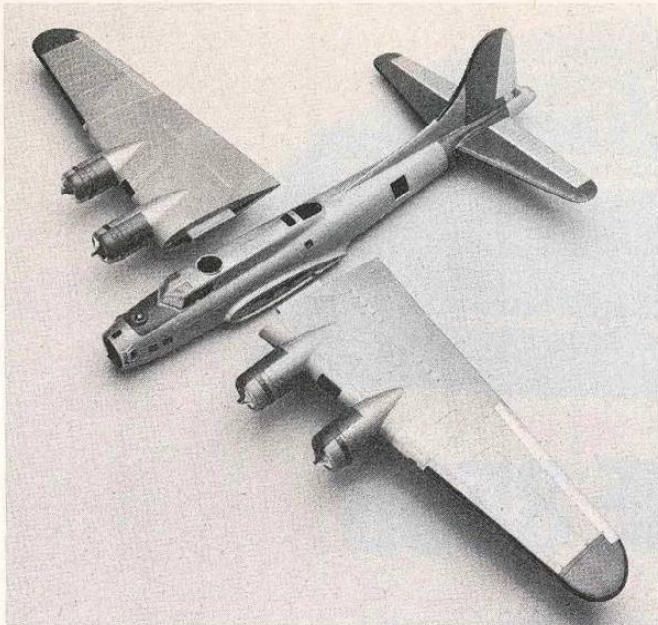


Fig. 1. Monogram's 1/48 scale B-17G in subassembly stage. Painted areas will be masked over before being plated.

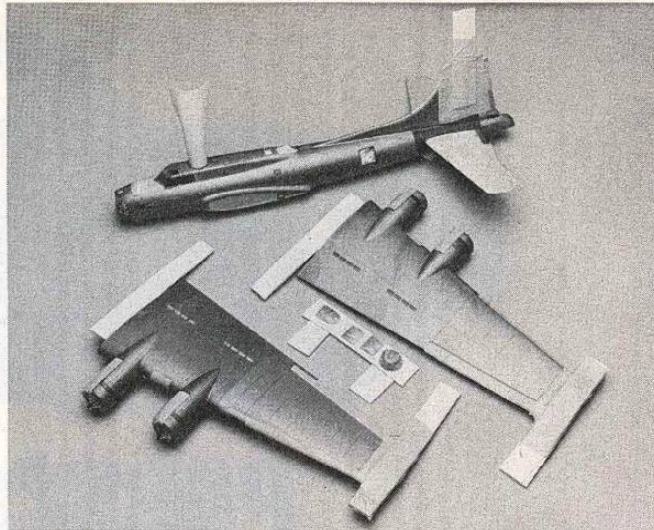
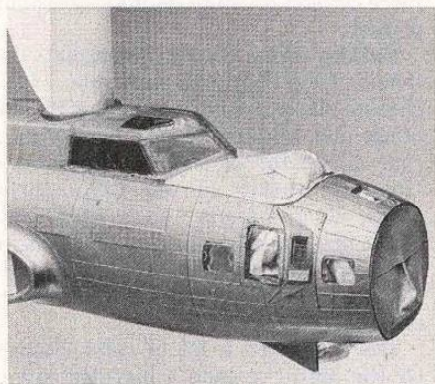


Fig. 2. Some ingenuity is required to mount the tabs on the parts. Sheet styrene strips are glued across wing mount tongues and sturdily taped over the painted wing tips. A styrene strip is taped to the painted tail and a coil of thin styrene is tack glued into top turret opening. Windows with liquid-masked frames are grouped on a homemade styrene strip sprue.



down time removes air from the chamber so that the metalizing process will work. After the vacuum is released, the chamber is opened, the rack slid out, and the parts removed.

Incidentally, the familiar "chrome" found on bumpers, grilles, wheels, and headlights in plastic car kits is produced this same way, but the high gloss effect is created by a gloss overspray.

You won't want this for most aircraft applications, so be sure to ask the plater to remove your job from the rack before they put on the gloss overspray.

The next time you make a bare-metal aircraft, try having it plated. When your friends ask how you got that realistic aluminum look you can tell them in all sincerity, "It's the real thing!"

FSM

Fig. 3. Cockpit windows are liquid masked and the frames cut out with a sharp hobby knife so that they get plated along with fuselage. After plating, the sheet styrene in the turret opening is removed with a careful twist. Note all openings are stuffed with masking tape to prevent plating the inside detail.

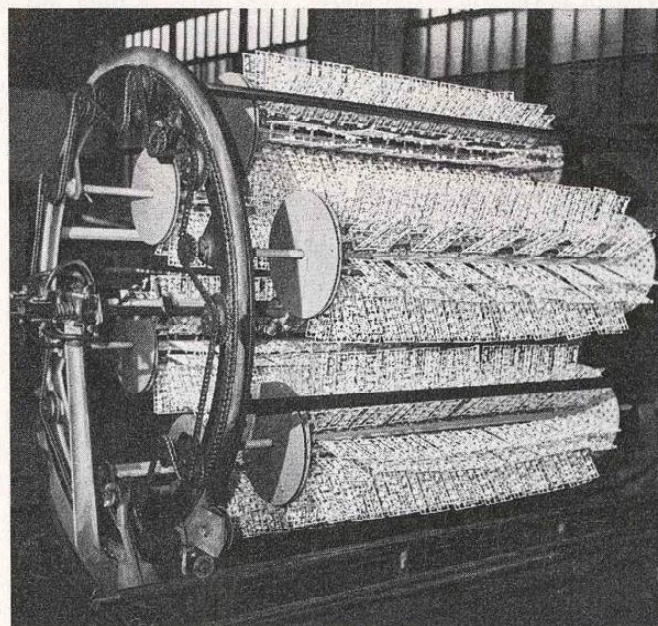


Fig. 4. Hundreds of sprues are clipped to the racks of a commercial vacuum plater. Chain drive rotates each rack in ferris-wheel fashion so that the plating covers all the parts.

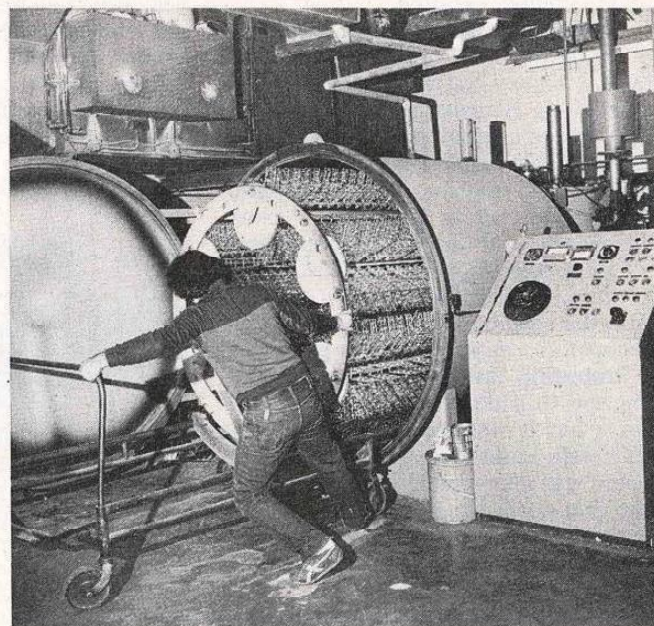


Fig. 5. The plater removes the rack from the vacuum chamber. The plating takes place in just a few seconds but it takes up to 15 minutes to pump air out of the chamber.





# PORSCHE 356B

Building your first epoxy resin car kit

BY WAYNE E. MOYER

**E**POXY RESIN KITS suggest something exotic — at least out of the ordinary. The 1/43 scale automobile model market has been dominated by cast-metal kits of varying quality, but now along comes epoxy resin.

Record is a small French company producing high-quality 1/43 scale kits.\* These kits, though not unique, are unusual in that they are cast in epoxy resin. I don't know the exact process, but I do know that to someone used to white-metal castings, the resin parts are exceptionally clean and smooth — and incredibly detailed.

The kit (No. 53) is simple, with only a few parts, Fig. 1, and if you've never built an epoxy kit, this is a good one to start with. Somehow the casting process allows a great deal of detail (and unbelievable undercuts) in a single casting. The interior and chassis plate, Fig. 2, are cast as one piece — seats, dashboard, and instrument panel, and a hollow steering wheel shaft all molded in place. The door handles are cast with the body but there's an open space between the handle and door panel.

**Preparing the parts.** My body casting had thin flash in a couple of windows, but it was easily removed with an X-acto knife and sandpaper, Fig. 3. There was also a mold line on the rear pan that needed to come off, Fig. 4, but the epoxy castings sand so much easier than metal that no filing was necessary anywhere.

After all the parts were cleaned up, I washed them with mild detergent and

warm water, rinsed them thoroughly, and sprayed with Floquil's R9 Primer. If you don't have an airbrush, a spray can of auto body primer will work, though you'll need to be careful not to apply too much and obscure the small details. Model paints have no problem sticking to epoxy resin.

The primer coat revealed two areas on the body casting with small pinholes, Fig. 5, apparently from bubbles that formed during the curing process. I sprayed some primer in a jar and let it thicken, then brushed this over the pinholes to fill them, Fig. 6. After the primer had dried, I sanded these areas with 400-grit sandpaper, Fig. 7. The body was then primed again and gently wet sanded with 600-grit sandpaper, taking care not to sand through the primer. Since the castings were smooth, this light sanding was sufficient to produce a surface ready for the color

coats. The final sanding will be much more critical if you're using a spray can primer.

**Putting paint on the Porsche.** The inside of the body and both sides of the chassis plate/interior were sprayed flat black and allowed to dry. I applied a coat of semigloss clear to produce a "leather" luster to the upholstered seats, door panels, and headliner. When dry, I masked the entire inside of the body and taped it to a homemade coat hanger spray stand for the color coats, Fig. 8.

There weren't a lot of color choices for the 356. I've seen a metallic silver (hard to do in small scales), red, cream, and black — was there a light green, too? Anyway, a friend of mine had a red 356 for many years, so that's the color I chose. Testor No. 1103 Red is a good match and easy to find. (If you're really looking for authenticity, order some

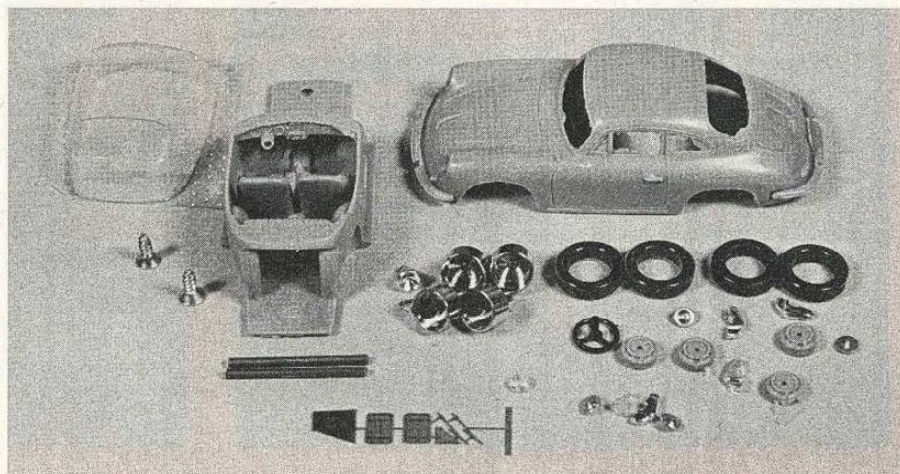
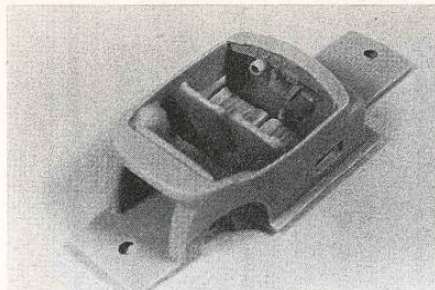


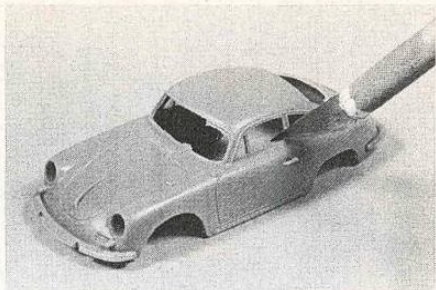
Fig. 1. There aren't many parts to Record's Porsche kit: the complex interior casting, body, wheels, vacuum-formed "glass," and a few trim pieces.

\*Automotive and Aviation Miniatures, P. O. Box 61, 5 Drake Avenue, Silver Creek, NY 14136.

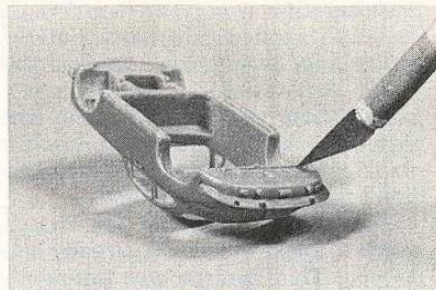




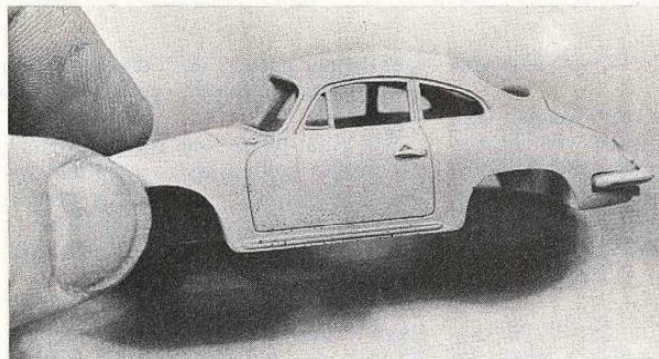
**Fig. 2.** The interior is cast in one piece. Note undercuts behind dashboard and rear seat — steering column is hollow, too.



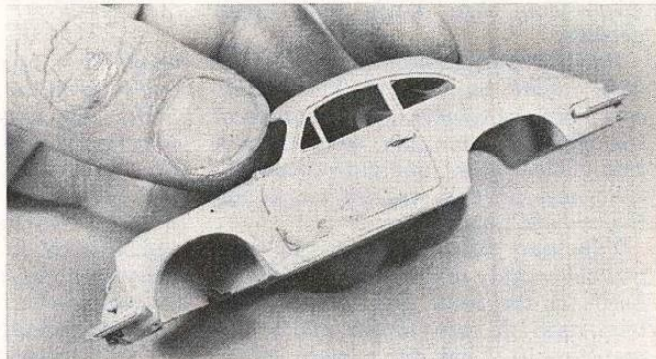
**Fig. 3.** Flash was cut out of the window openings and the edges gently sanded with 320-grit sandpaper.



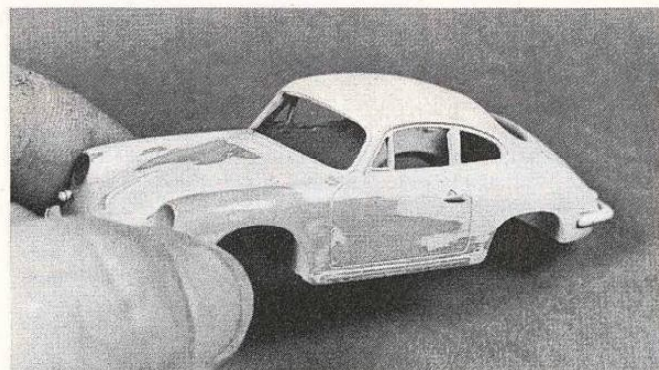
**Fig. 4.** One of the few mold lines goes across the rear pan, but it's easily removed with a knife and sandpaper.



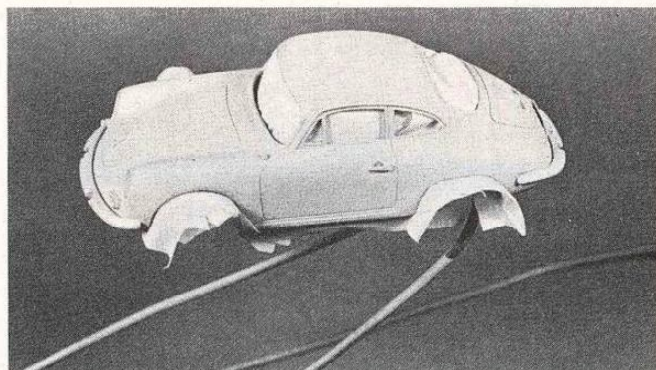
**Fig. 5.** Though the surface looked smooth, the primer revealed these pinholes along the left door and rocker panel.



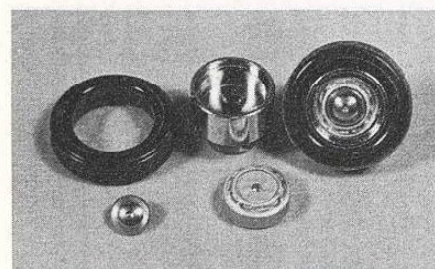
**Fig. 6.** The author used partially dry Floquil R9 Primer to fill the pinholes and set it aside to dry.



**Fig. 7.** The filled area was sanded down to the resin and a new coat of primer was applied to the model.

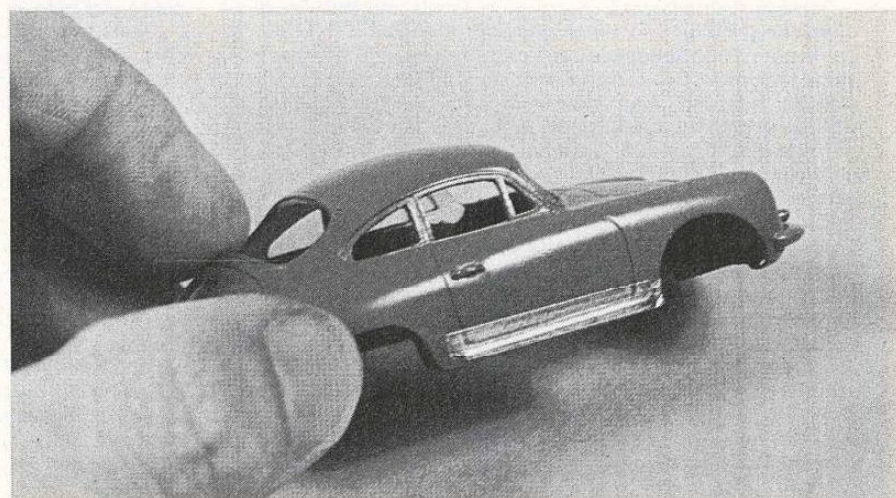


**Fig. 8.** After the interior was painted, it was installed and masked. Note the bent coat hanger serving as a spray stand.



**Fig. 9.** Plated wheels with cast inserts, plated hubcaps, and vinyl tires produce a realistic wheel assembly.

**Fig. 10.** An oversize piece of self-adhesive Bare-Metal Foil was buffed down onto the rocker panel and the excess trimmed away with a sharp knife.





touch-up paint from your local Porsche dealer.) I applied thin coats, building up the color evenly, then finished with a wet coat — not too wet though to keep it from running. Now the hard part; I put the body away in a dust-free place (even a box with a lid will do) and didn't touch it for several days.

Meanwhile, I built up the chassis, which is a joke since it is already done for you. This Porsche was taking the curves before the days of padded dashboards, so I painted the dash and instrument panel with the body color. The steering wheel has a wood rim with chrome spokes, while the instrument faces were black with green needles.

Porsche wheels were painted silver with chrome hubcaps; all I had to do was paint the spiders (center portion of the wheels) aluminum, give them a coat of clear gloss, and glue them into the wheel. All that was left was to add the tire and hubcap, Fig. 9.

**Trim and details.** When the body was thoroughly dry, I used Bare-Metal Foil\* for the front and rear window trim, hood lift, side chrome, and bumpers, Fig. 10. I cut out a piece larger than the area to be covered, buffed it down with a soft cloth (or a cotton swab in tight areas), and lightly scored around the edges with a sharp X-acto

\*Bare-Metal Foil Co., P. O. Box 82, Farmington, MI 48024.



The completed Record kit looks like a real Porsche — can you tell it's only 3 5/8" long?

blade. Then I peeled off the excess and buffed down the foil.

The side windows, air scoops, and door handles were painted with Testor No. 1146 silver, then the entire body was coated with Future acrylic floor shine, which both protects the paint and seals the foil to the surface. Cyanoacrylates (super glues) work well on the resin parts.

**Final assembly.** I finished by gluing the shift lever and steering wheel to the interior, fitting the glass, gluing on the headlight buckets and bumper guards, and attaching the body to the chassis with the screws provided. The "glass" fits perfectly when cut into four separate pieces. Micro Kristal-Kleer works beautifully as an adhesive for

small clear parts; I used it to attach the clear plastic (fluted, yet!) headlight lenses, too.

The final touch was the photoetched air intake grilles and windshield wipers. I placed the parts on a piece of thick glass and carefully cut them out of the frame with a sharp X-acto knife, and glued them into place.

There you have it: an exceptionally easy to build, accurate (dimensionally as well as visually) Porsche 356B in 1/43 scale. Many of you may be reluctant to tackle a white-metal kit because it's "different," but if you build plastic kits, you'll feel right at home with epoxy kits. I'm delighted with the detail and realism of these little jewels. **FSM**



## A BRIEF HISTORY OF PORSCHE

Upon leaving Daimler-Benz in 1931 Dr. Ferdinand Porsche established his own independent design consultant firm, employing his son Ferry and other engineers. Business was good — Porsche designs were bought, built, and marketed by a number of small German automakers.

Porsche was selected to design a small, reliable car that could be produced in large numbers and that all Germans could afford — a "people's car," or Volkswagen. When war became imminent, Dr. Porsche went on to bigger things — literally! His Tiger tank was one of Germany's best and his Maus was the largest armored vehicle in the world in 1945.

These efforts, though, were not well received by the victorious Allies, and the immediate postwar years saw Dr. Porsche in a French prison and Ferry (after a short internment) and the rest of the design staff keeping a low profile in Grumd, Austria. There, Ferry completed Porsche design study number 356, a two-seat roadster with a tube-frame chassis, modified Volkswagen engine ahead of the rear wheels, many other Volkswagen components, and an aluminum body. Parts were acquired, body panels hand-formed, and the first Porsche, No. 356-1, was on the road in early 1948.

Apparently the car was, at best, squirrely. The VW engine and transaxle were turned around, so the rear suspension was now "leading arm." The 1.1 liter engine was reworked to provide about 40 horsepower, enough to propel the 1300-pound

car from 0 to 60 mph in slightly less than 18 seconds! It was no dragster, but apparently produced a lot of interest in car-hungry Europe. The 35 mpg efficiency didn't hurt either.

The prototype was sold, and the money was used to build a second 356, this one a coupe with a pressed-steel frame and the engine behind the transaxle, VW style. With high hopes that he might build as many as 500 356s, Ferry accumulated VW parts and began building Porsches at the rate of 5 per month. Two of the first coupes were entered in the 1951 Le Mans 24-Hours, and one easily won the 1100 cc class, starting a Porsche association with Le Mans that continues today.

The rear-engined 356 wasn't faster than the prototype (87 mph tops) but was so much fun to drive and so well built that Porsche couldn't turn them out fast enough. Porsche negotiated a return to its original location in Zuffenhausen and set up a "real" production line — only about 50 aluminum-bodied cars were built in Austria. The Zuffenhausen Porsches had steel bodies, upping the weight to 1800 pounds, so the engine was punched out to 1300 cc and a 1.5 liter version followed in 1951.

The 356A with unit-body construction was introduced in 1955, with five engine options ranging from 1.3 to 1.6 liters, and various stages of tune. Both coupe and roadster versions were offered, and for a short time, so was a lightweight Speedster that was an instant winner; it's still competitive in Sports Car Club of America racing! More and more Porsche parts replaced VW components, and the 356B followed in 1959. This was in turn replaced by the 356C (with disc brakes) in 1963. Production of the 356 tapered off as the 911 program picked up, and the last rolled out in 1965.

There were 150 times more 356s built — more than 76,000 — than Ferry Porsche had hoped, establishing Porsche as a manufacturer and a dominant power in sports car racing. Not bad for a collection of rearranged VW parts! **Wayne E. Moyer**



# Spend \$105,000 for the real thing.



## Or save a bundle and build this Lamborghini Countach 1:12 scale model all by yourself.

**"This is a bad boy's car, and everybody knows it."**

That's what *Car and Driver* magazine said about the Lamborghini Countach after they tested it. They likened its effect on passersby to the looks you'd get if you walked down Fifth Avenue with Pia Zadora, were she all dressed up in about eight yards of Saran Wrap.

The Countach is an outrageous car. A shocking car. An angry car for automotive extremists for whom too much is never quite enough. It is, as *Car and Driver* summed up, "the flat-out farthest-out car on the market."

**Build this "Dream Machine" and Discover a Fascinating New Hobby.**

No special skills are needed to build this 15-inch exotic GT—plans and instructions are complete and easy to follow. Nearly 300 multi-colored, chromed, and metalized parts assure incredible detail. Even the ignition wires are true to scale and the metal coil spring suspension really works! You get a lug wrench to change your wheels, and the tires are real rubber. Doors, trunk, and hood are operational. Headlights pop open and shut. And the sealed beams and rear lights—light! (Although you'll have to supply your own batteries.)

### An Everything-You-Need Special Offer

To turn you on to car modeling we've put together an offer that's as hi-revving as the car itself. With our Lamborghini Countach Kit we're going to include a Testor Plastic Model Finishing Kit (No. 9160) that contains cement, contour putty, brushes, a hobby knife, precision gluing tips, sanding films, 11 (count 'em) bottles of flat enamel paint, a bottle of thinner, drop cloth, and a mixing storage tray—the works! We'll even throw in a can of Italian racing red spray body paint! And, best of all, a 64-page book called "Building Plastic Models" that will show you how to build like a pro. Your

price for everything—the kit, paints, materials and book, just \$49.95—less than a tune up for the wheels you're driving now! (And a savings of over \$16 if you were to buy everything separately.)

To order your Lamborghini Countach kit plus Testor Model Finishing Center and book, just fill out and mail the coupon below. Or, for fastest service on credit card orders, call

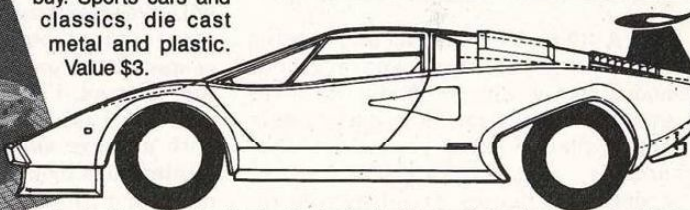
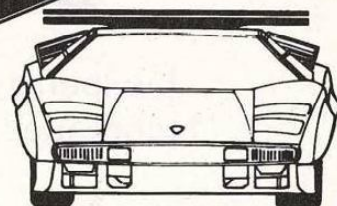
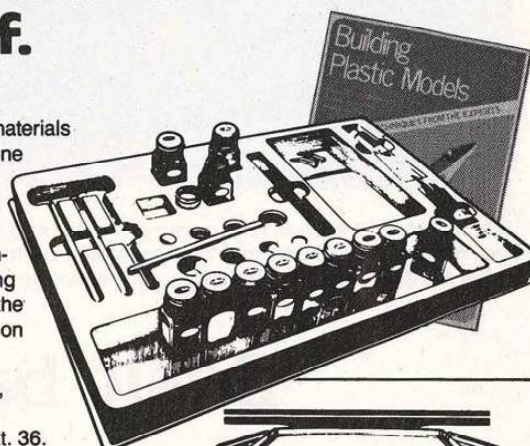
**800-228-2028** ext. 36,  
24 hours/day.

In Nebraska, call 800-642-8300, ext. 36.

### MODEL EXPO, INC.

23 Just Road, Fairfield, N.J. 07007.

**EXTRA BONUS!** Free with your order! Full color, 48-page catalog of other kits you can build, or collectible models you can buy. Sports cars and classics, die cast metal and plastic. Value \$3.



Dept. FSM-114

Mail to:  
**MODEL EXPO, INC.**

23 Just Road, Fairfield, N.J. 07007

**YES!** Please send me the Lamborghini Countach Kit (No. OT-3107TM) plus Testor Plastic Model Finishing Center, all for just \$49.95.

☐ My check or money order is enclosed. (Please add 10% per order for insured delivery. N.J. residents must add 6% sales tax.)

Charge my credit card:

☐ MasterCard ☐ Visa ☐ American Express

Account No. \_\_\_\_\_

Exp. Date \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

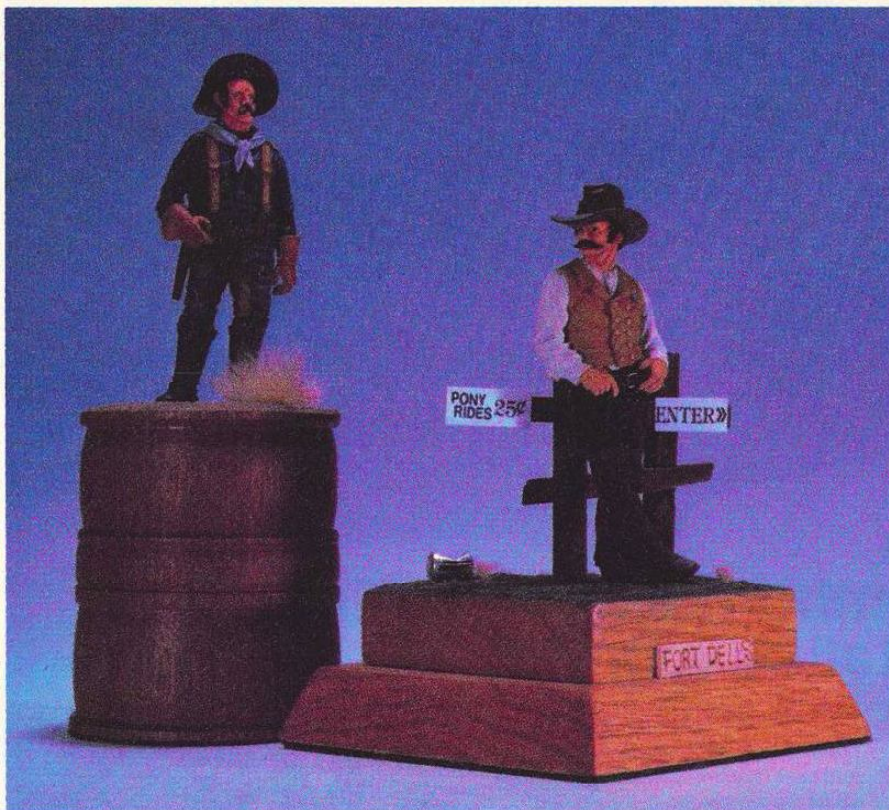
City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

YOU TAKE NO RISK. IF NOT COMPLETELY SATISFIED  
RETURN WITHIN 30 DAYS FOR FULL REFUND.





All photos, FINESCALE MODELER: Paul A. Erler unless otherwise credited.

Jeff's Series 77 90 mm 1876 cavalry captain and Wisconsin Dells cowboy are already fine examples of modeling, but the bases (spindle stock, left, stepped oak blocks, right) complement the figures for added eye appeal.

## Basic bases

Inexpensive materials and simple techniques to accent prized models

BY JEFF BRODZIK

HAVING ATTENDED and entered several national and regional model shows and contests, it never ceases to amaze me how participants display their finished products. Unfortunately, many beautifully finished models and figures are displayed on poorly finished blocks of wood that closely resemble leftovers from a construction site.

Certainly, it's what's on top of the base that counts, but if you think of your completed project as a reflection of your interest and care as well as something that should be totally pleasing to the viewer's eye, then a poor job on your display base can only hurt what otherwise might be a superb piece of modeling. To lose "eye appeal" because of a poorly finished base is unnecessary, especially when professional results can be achieved by investing only a little extra time and effort.

I'm not going to fill page after page with woodworking tips and techniques that require thousands of dollars worth of special equipment and years of training. Instead, I'll suggest a few simple ideas on base work that any modeler with average skills can use — with a minimum of tools and expense. Keep in mind that this article isn't meant to be the "final word" on bases; it's intended to share some simple ideas with you, and encourage you to explore new areas on your own.

**Craft bases.** The simplest and most obvious place to start is with what are commonly called craft bases. These are pre-cut, pre-routed, decorative pieces of wood that can be found in most hobby and craft shops. They come in a wide assortment of shapes, sizes, and patterns, Fig. 1, and when finished properly, become attractive bases for dioramas, figures, or models. The materials I use to finish craft bases are shown in Fig. 2.

The wood used to make these bases has two different types of end grain, Fig. 3. The edges that are cut with the grain are smooth or "closed," but where the wood has been cut across the grain, the edges are porous or "open." When the wood is stained and finished later, these two edges can take on radically different appearances, ruining the finished product.

The solution to producing four equally attractive edges involves sanding the open-grained edges to close the grain. Commercially produced wood fillers are available but nothing produces the same results as several different grades of sandpaper and a fair amount of elbow grease. After a generous sanding, all of the edges of the base will be equally closed, will accept stain at the same rate, and will finish to the same degree of luster. If the base won't be covered by groundwork, the top also should receive a careful sanding.

Most craft bases are made from soft pine, so it's best to begin with either 80- or 100-grit sandpaper. Wherever possible, sand with the grain, but if you must sand across the grain, do it gently. Next re-sand with 220-grit sandpaper; this smooths the wood, closes the end grain, and prepares the base for staining.

All sanding should be done with sandpaper wrapped around a rigid block. My favorite tool for this is a blackboard eraser. The hard back is excellent for rough sanding, and the soft felt side is perfect for sanding curved surfaces, hard-to-reach grooves, and finishing. The sandpaper's life can be extended by occasionally tapping it on a workbench or hard surface to remove sanding dust that clogs the grit.

After sanding I rub the base with a damp rag; this causes the grain of the wood to rise slightly, appearing as a light layer of fuzz. After the base dries, I remove the fuzz by lightly sanding with 220-grit paper.

**Stains.** The best stain for our purposes is pigmented oil (wiping) stain. My favorites are manufactured by Formby.\* They come in a wide range of colors which can be mixed if desired, and they make it easy to achieve professional results. I like the darker colors such as walnut and mahogany, but my choice of color is often influenced by the subject that will be mounted on the base.

Stains can be applied using a rag or brush. The brush is neater, but no matter how careful I am, the stain eventually find its way to my hands, so I recommend wearing gloves.

Wherever possible apply the stain with the grain, and unless you have a desire to color your hands the same

\*Formby's, Inc., Olive Branch, MS 38654.



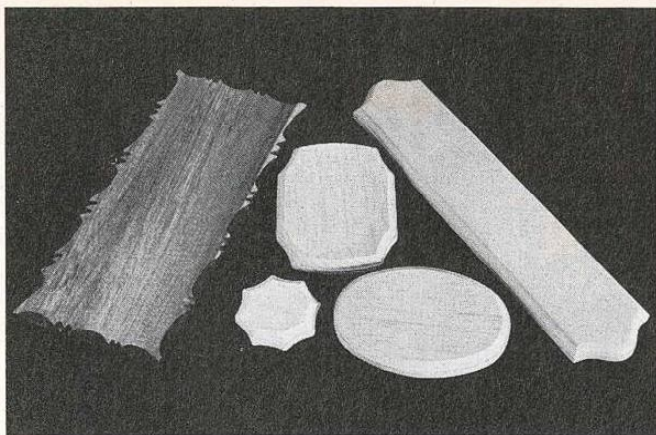


Fig. 1. Craft bases come in many sizes, shapes, and woods. They are ready to stain and finish.



Jim Zeske

Fig. 2. Craft bases can be finished using these materials. Sandpaper and steel wool smooth the surface of the wood.

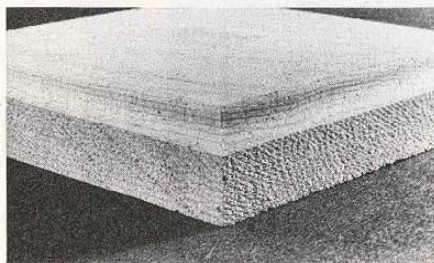


Fig. 3. The left edge is cut with the grain while the right is across the grain. Notice how rough the cross-grain edge is. The open pores can be closed by sanding.

color as your base, stain only one surface of the base at a time. Wipe off the stain with a soft rag after five or ten minutes; the longer the stain stays on the wood, the darker the color. Remember, if the color is too light after the first coat is wiped off, a second application will make it darker. It's not as easy to correct if it's too dark. To find out how fast the stain is absorbed, test the stain on the bottom of the base where mistakes aren't likely to show.

**Protective finish.** The two best fin-

ishes for bases are tung oil and polyurethane. Formby's Tung Oil Finish comes in both low gloss (satin) and high gloss. I have used it for years on everything from simple bases to furniture and I've never been disappointed in the results. I like the high gloss finish; it doesn't look artificial or plastic.

Put a few drops of tung oil on the palm of your hand or on a soft rag and rub it into a small area of the base. A little heat is generated as the oil is worked into the surface, turning it a slightly darker color. Allow the oil to dry overnight, then buff lightly with fine steel wool. Wipe the surface with a dry cloth and apply a second coat. When this dries, you will have a beautiful deep finish.

Polyurethane is a plastic polymer material which provides a hard, damage-resistant finish. Polyurethane can be applied with a brush and usually takes about 24 hours to dry. During that time the work piece must be kept away from dust and airborne debris that could become imbedded in the surface, ruining the finish.

Different manufacturers produce var-

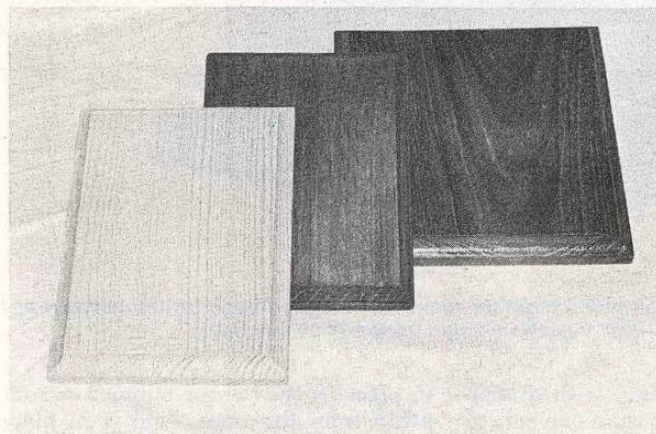
ious intensities of gloss and satin polyurethane finishes; one company's idea of a satin finish may be closer to another company's gloss. When in doubt, ask to see samples before buying. I like the satin finish manufactured by Behr\* which produces a slightly glossy sheen. The three stages in finishing a base are shown in Fig. 4.

No matter which final finish you choose, give your completed piece of woodwork one loving touch — a coat of furniture wax. I'm not talking about the variety that smells like lemons and is advertised on television, but the paste finishing wax used for fine furniture. I like Minwax\*\* furniture wax. Using furniture wax is easy; apply a thin, even coat of wax with a soft rag, let it dry thoroughly (10-15 minutes), then buff it with a clean cloth. When done correctly, the overall look is like that of hand-rubbed furniture; luxurious, yet remarkably easy to do.

If you plan to cover your base with Celluclay or any water-based sculptur-

\*Behr Process Corp., Santa Ana, CA 92702.

\*\*Minwax Co. Inc., Clifton, NJ 07014.



Jim Zeske

Fig. 4. (Left to right) An unfinished craft base, sanded and stained, and finished with tung oil. Note the dramatic change in color and sheen of the base at each stage.

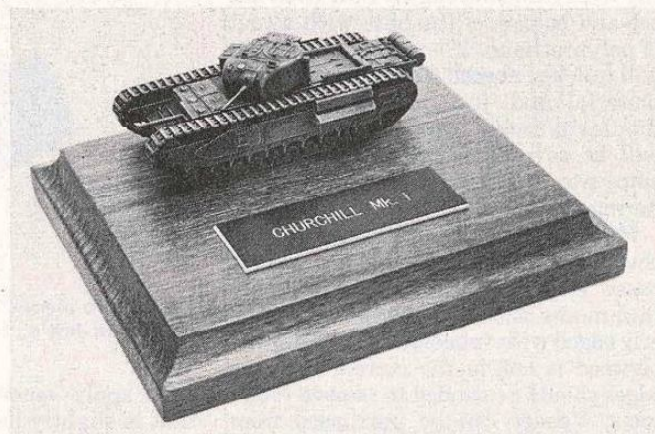


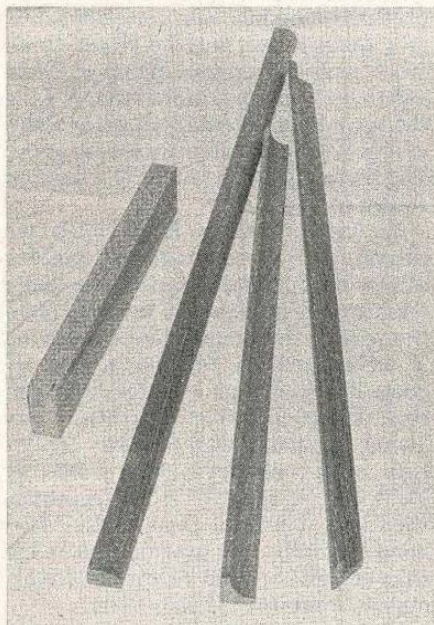
Fig. 5. The engraved plastic nameplate adds the finishing touch to this display of a weathered Hasegawa 1/72 scale Churchill Mk. 1 tank mounted on a finished craft base.





Jim Zeske

**Fig. 6.** A simple-to-make, but good-looking base can be produced with a piece of plywood, veneer, and white glue.

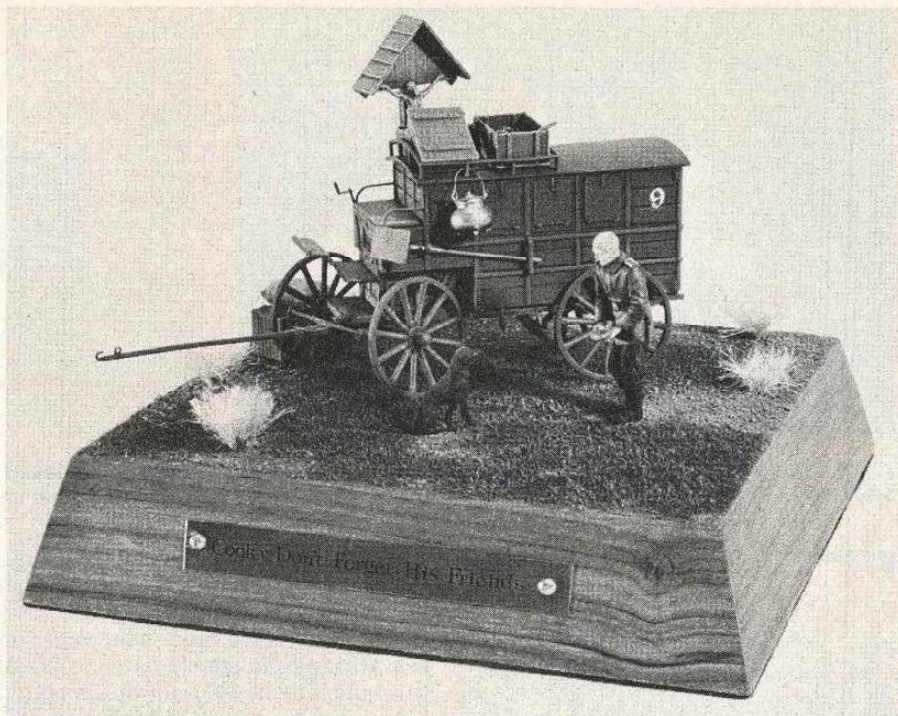


Jim Zeske

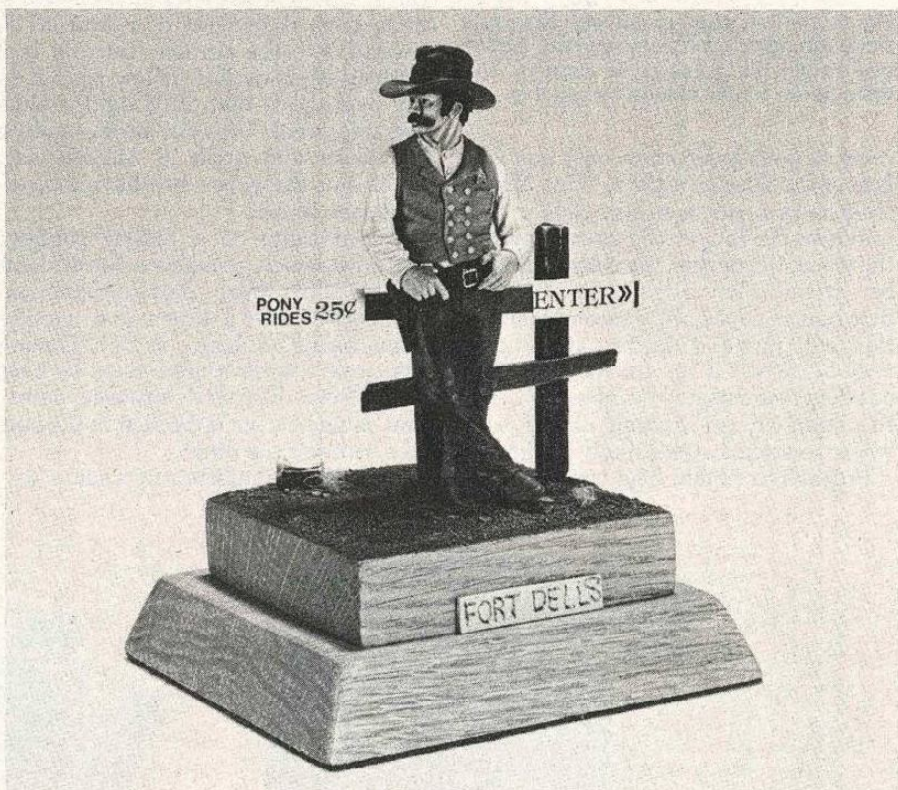
**Fig. 8.** (Left to right) Rectangle, half-round, cove, and corner oak molding can be added to the edges of a base.

ing material, thoroughly seal both the top and bottom of the base with a coat of polyurethane. If you don't, the wood will quickly absorb the water from the material and, just as quickly, warp. Similarly, never wax an area which will be covered with these materials since wax will prevent them from adhering to the base.

**Plywood.** Perhaps the easiest and cheapest material available for making bases is plywood. It comes in many thicknesses and looks terrific once properly edged with veneers, Fig. 6. After the plywood is cut to the correct size, the edges should be sanded to remove rough spots. Veneer can be purchased from hardware stores or lumberyards in 1- or 2-inch-wide rolls usually 6 feet long. Oak, walnut, mahogany, and basswood veneers are the most common.



**Fig. 7.** A few pieces of plywood nailed together, angled inward, and then covered with veneer produce a unique base for "Cooky Don't Forget His Friends."

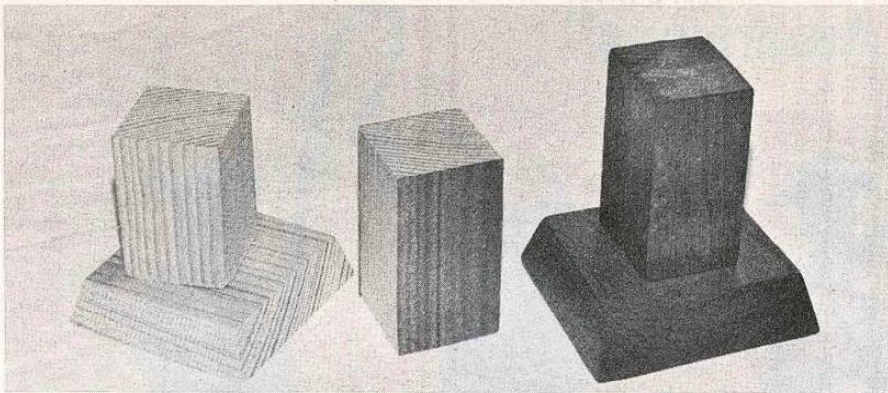


**Fig. 9.** Two pieces of oak glued together make this stepped base for the modern-day cowboy in Jeff's "Fort Dells" vignette using a Series 77 90 mm figure.

To apply veneer, start with a strip that is slightly longer than one side of the base; this allows for any movement while gluing. Brush a smooth layer of white or yellow woodworking glue on the edge of the base and lay the veneer

in place. If the veneer bubbles or rolls away from the edge, hold it in place with a block of wood or clamp until the glue dries. Repeat this process for the remaining sides and trim off the excess veneer. Since veneers can bend around





Jim Zeske

**Fig. 10.** These pedestal bases are made from pine blocks. To achieve a hardwood finish, veneer is glued to each face and the blocks are nailed or cemented together.

corners without breaking, it's possible to use it for circular and oval bases.

I've found that a model displayed on a base that sits higher than others around it often catches the viewer's eye. Laminating several pieces of plywood produces a base that elevates the model, breaking the monotony of a one-level display. Beveling the edges of the base also directs the viewer's eye toward the subject matter, Fig. 7.

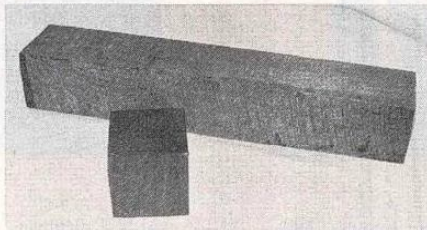
**Molding.** Another simple yet attractive base can be made by edging a plywood square with molding. This material comes in a wide variety of shapes and sizes, Fig. 8, and can turn an ordinary block of plywood into what appears to be a beautifully finished piece of expensive hardwood. Molding is usually made of oak and can be found at hardware stores or lumberyards. Shapes range from simple squares and rectangles to half-round, cove, and fancy "beaded" patterns.

Molding can be glued or nailed to one or more edges of the base. Both ends of each piece will have to be cut at a 45-degree angle if you want the molding to go all the way around the base. By varying the size and shape of the molding, a wide variety of attractive bases can be produced. Molding is usually sold by the inch, so buy the smallest length you can find to do the job.

**Step and pedestal bases.** Another simple method of elevating your model is to place it on a stepped or pedestal base, Fig. 9. Nail or glue together two squares of wood, one smaller than the other. I recommend solid wood over plywood for this type of base.

Figures can be displayed on small pedestals made from 2" x 2" hardwood blocks mounted on a small square of pine. Both pieces can be made from inexpensive wood, then covered with veneer, giving the impression of a solid hardwood base, Fig. 10. Molding can be added to the base of the pedestal as well.

Self-standing pedestal bases can be



Jim Zeske

**Fig. 11.** A piece of walnut turning stock cut to the desired height makes an attractive, self-standing, pedestal base.

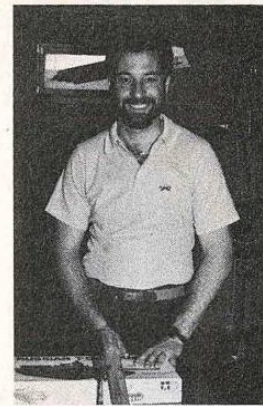
made from hardwood turning stock available at most lumberyards, Fig. 11. Hardwoods can be cut to the desired length with a hand saw, but a few kind words to the lumberyard attendant may get the job done for you. Turning stock is also purchased by the inch, but the cost is reasonable considering there's almost no waste.

**The unusual.** Although the ideas discussed so far use a minimum of effort and tools, other simple sources of bases can be found by sharpening your "modeling eye" on your next trip to the hardware store or lumberyard. Decorative spindles, used to make stairway banisters and railings, can be cut into small sections and made into fancy pedestal bases, Fig. 12. Finished hardwood shelving materials can be cut into small squares and used as bases. I even know an artist who used the wooden top from an after shave bottle as a base for one of his figures!

**Base bottoms.** I always glue a piece of felt to the bottom of my finished bases. The felt not only serves a practical purpose of making them less likely to slip and slide, but also adds a finished look to the overall piece. Once again, a lot of eye appeal is gained at little cost.

Take that extra bit of time to turn out a finished base for your model or figure. The little effort involved can enhance your finished product, and you might even find that it's almost as much fun as modeling!

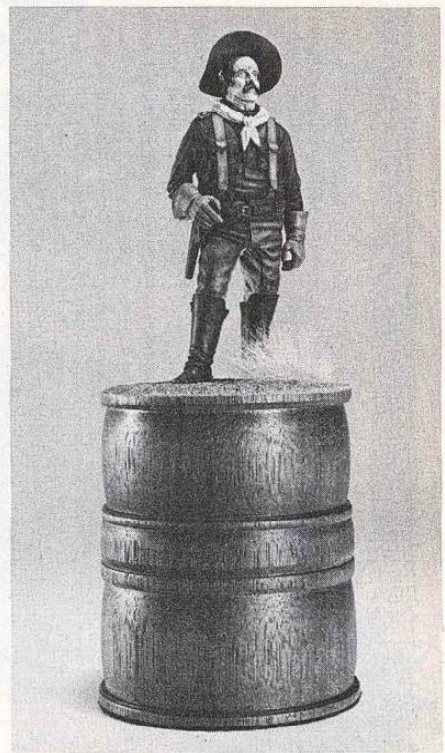
**FSM**



## Meet Jeff Brodzik

Jeff is a graduate of the University of Wisconsin-Milwaukee with a master's degree in education and program development and design. He is married and teaches math and science in the Greendale, Wisconsin, school system.

Jeff's spare time is evenly divided between woodworking and modeling or, he reports, "making two grades of sawdust, coarse and fine." He is a member of IPMS/U. S. A. and vice-president of the Milwaukee Military Miniature Modelers. Jeff's models and figures have won both local and national IPMS awards, as well as placing in the annual Military Miniature Society of Illinois show.



**Fig. 12.** A finished section of banister spindle was used as the base for this 90 mm figure. Note the finished, professional look it lends to the project.



# NEW in "The Americans"



A/39  
Plains Indian, 1870



A/40  
Bounty Hunter, 1880



A/41\*\*  
U.S.N. Seaman, 1941



A/42  
Plains Indian, 1870

90mm kits: Foot, \$22.95 and \$25.95\*\* each. Mounted \$76.95 each.

**FAST, EFFICIENT MAIL ORDER SHIPPING. DEALER INQUIRIES WELCOME.**

Illustrated catalog of all our miniature kits is available for \$4.50 at your hobby store or \$4.50 plus \$1.50 shipping direct.

## SERIES 77 miniatures

7861 Alabama Avenue, #14, Canoga Park, CA 91304, U.S.A. Telephone: (818) 340-5117



INSIDE  
**FREE DECAL SHEET**  
NORTH AMERICAN HARVARD AND AT-6 TEXAN MARKINGS

VOLUME 6 NUMBER 1 OCTOBER 1992

# SCALE Aircraft Modelling

95p

THE INTERNATIONAL MAGAZINE FOR SCALE AIRCRAFT MODEL BUILDERS

**ANNUAL SUBSCRIPTION \$38.00**  
Including postage

**SCALE Aircraft Modelling**

DEALER ENQUIRIES WELCOMED

**Which is the only modeling magazine in the world to give its readers a free decal sheet?**

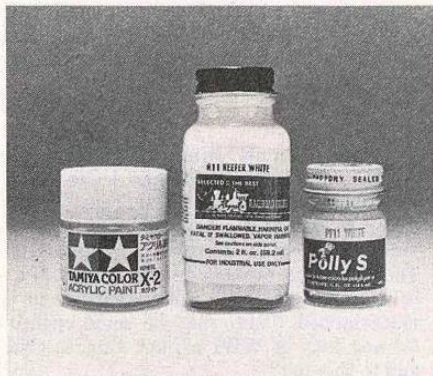
Yes, Scale Aircraft Modelling provides its readers with a superb aircraft decal sheet every other issue linked with one of the lead articles. Apart from that it has the best camouflage and markings drawings, detailed histories and plenty of how-to-do-it information and up-to-date reviews of the latest kits, decals and accessories. It's a must for all aircraft modelers. Check your local store or take out an annual subscription, now!

**SCALE AIRCRAFT MODELLING**  
226 HIGH STREET,  
BERKHAMSTED, HERTS,  
HP4 1AD, ENGLAND  
or from Bill Dean Books Ltd., 166-41  
Powells Cove Boulevard, Whitestone,  
New York 11357



Got a modeling problem? FSM Clinic is here to help. FSM's staff will try to answer any modeling question and solve any modeling problem you have. FSM Clinic, however, is not a reference service for markings, unit histories, and other non-modeling, research questions. Send your questions to FSM Clinic, FINESCALE MODELER, 1027 North Seventh Street, Milwaukee, WI 53233.

Conducted by Paul Boyer



**Getting white to cover.** I'm painting the underside of Airfix's 1/48 scale EA-6B Prowler with Tamiya's gloss white (X-2) but I'm having trouble getting it to cover. It leaves brush marks and it won't stick in some areas no matter how many coats I apply. I tried washing the model in warm, soapy water, but it won't help. What can I do?

Mark Schicker

Although I'm still experimenting with Tamiya's new acrylic paints, I also found the X-2 white troublesome. I gather from your letter that you are hand brushing your model but I've airbrushed mine and had the paint "creep" away from some areas. It seems particularly sensitive to oil on the surface of the plastic. You might try wiping mineral spirits or rubber cement thinner over the trouble spots after washing them with soapy water. These solvents will loosen oils but won't affect the plastic.

My favorite white paint is Floquil's R11 Reefer White, but this can only be airbrushed. For hand brushing, I like Polly S PF11 White. Both of these colors dry flat and would need a gloss overspray on the Prowler.

Paul Boyer

**Metal blackener.** On page 40 of the book HINTS AND TIPS FOR PLASTIC MODELING, a product called Hobby Black is shown. I've tried to find it in many hobby stores to no avail. Where can I get it?

Rudolph A. Dipietro

Hobby Black metal blackener is sold by RAC Distributing Co., 6861 Northpoint Court, Troy, MI 48098. Hobby Black No. 1 produces a black-brown weathered look, while No. 2 gives a jet black appearance. A similar product is Blacken-It from A-West, P. O. Box 5746, San Bernardino, CA 92412.

Burr Angle

**Orange stripes.** I'm building Monogram's 1/32 scale P-51D Mustang and I have it painted cream and would like to have orange striping on it, about 1/8" wide. Are orange decal stripes available? Robert Naugle

Orange stripe decals are available from Virnex Industries, Inc., Route 1, Herwig Road, Reedsburg, WI 53959. Virnex has two different oranges, "safety" orange (a light orange, sheet No. 9164) and red-orange (sheet No. 9165). Several widths and colors are available. Microscale Decals, Krasel Industries, Inc., 919 Sunset Drive, Costa Mesa, CA 92627, has a solid-color orange sheet (No. TF-10, Federal Standard color FS 12246) that you can cut into strips.

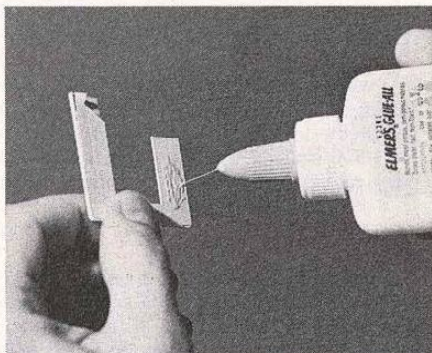
P. B.

**Locating Weld-On #3.** I've had trouble finding a hobby shop in Vancouver, British Columbia, that stocks IPS Weld-On #3 plastic cement. Do you have any idea how I can get it?

Susan Lee

Weld-On #3 is distributed by Industrial Polychemical Service, P. O. Box 471, Gardena, CA 90247. Have your dealer contact them. Also, try calling a plastic supply house in Vancouver.

P. B.



**White glue threads.** I have trouble with Elmer's Glue-All "threading" or leaving spider webbing behind as I apply it. I've tried cooling it, warming it, keeping the container upright, cussing — even buying a new bottle — but nothing helps. So, help!

Bill Hogan

Borden may have modified the formula of Elmer's Glue-All recently because I have never had a threading problem until my most recent bottle. First, try thinning the bottle with one or two teaspoonfuls of water. Elmer's Glue-All and similar white glues are based on polyvinyl acetate, a water-soluble compound designed to bond porous surfaces like paper and wood.

Also, try adding a few drops of liquid dishwashing detergent to the bottle of glue and stirring. This acts as a wetting agent, breaking down the surface tension of the glue, which is causing the threading.

P. B.

**Addresses.** I'd like to get a catalog for the AMT 3-in-1 kits. Do you have an address I can write?

José Olivieri

AMT was bought by the Ertl Company a few years ago and has released some of the old AMT 3-in-1 kits. Write the Ertl Company, Highways 136 and 20, Dyersville, IA 52040.

P. B.

I enjoyed Richard Wehr's article "Converting a 1/35 scale LVT(A)5 to an LVT(R)-X1 recovery vehicle" (January/February 1984 FSM), and I would like to try a similar conversion using the Nitto kit. My problem is finding the kits. Where can I get them?

Warren O. Harry

I'm not sure that the LVT(A)5 kit (No. 94-1000) is still available, but try contacting Island Modelcraft Supply, Inc., 855 South Hoffman Lane, Central Islip, NY 11722. The phone number is (516) 234-5090. Island should carry most of the available Nitto kits.

P. B.

**Where are they?** I am trying to complete a collection of Soviet fighter aircraft. Is there a 1/72 scale kit of the Su-15 Flagon available? Also, where can I obtain a 1/72 scale Douglas A-3 Skywarrior or B-66 Destroyer? I believe Revell produced a 1/72 scale A-3 Skywarrior kit a long time ago; is it still on the market?

Robert Martinez

Good luck trying to fill some of your voids in a Soviet fighter collection in any scale. I attended the IPMS/U.S.A. national convention this past July in Atlanta, Georgia, and this same question about Soviet aircraft came up at the manufacturers' meeting. (This is where representatives of some of the major kit and accessory manufacturers, as well as publishers, answer questions from the modelers in attendance.) The answer was simply, "they don't sell," and that, for the manufacturers, is the name of the game. Apparently the Hasegawa 1/72 scale MiG-25 kit sold reasonably well since Viktor Belenko's September 1976 defection in a Foxbat was still fresh in the minds of aviation modelers, but most other Russian subjects have not made money for the modeling industry.

There is, however, a vacuum-molded kit of the Su-15 Flagon produced in the U. S. by Nova. It's available from Archer's Hobby World, P. O. Box 9809, Fountain Valley, CA 92708. The Revell A-3 Skywarrior you're thinking of was in 1/84 scale, a little too small for a 1/72 scale collection. It's not generally available, but you may find it through kit collectors. Monogram had a B-66 with a droppable bomb (remember?), but it was also smaller than 1/72 scale. Airmodel had a 1/72 vacuum-formed kit of the B-66, but it too is hard to find. It's likely you'll see a vacuum-formed A-3 in 1/72 scale soon.

P. B.

**Israeli colors.** The instructions in my 1/48 scale ESCI Kfir C.2 kit say to paint the model brown, green, and sand over gray. Can you tell me exactly what colors are used on this aircraft and recommend any paints?

Scott Day

Testor Model Master paints have all the colors you're looking for: FS 30219 for the brown, FS 33531 for sand, and FS 34227 for the green. The undersides could be painted in one of three colors: FS 35622 (duck-egg blue), FS 36622 (the same light gray used on U. S. A. F. aircraft undersides in Vietnam), or FS 36375 (Light Ghost Gray). More recently, Israeli Kfirs have received two-tone gray paint jobs using the Compass Ghost paint scheme of FS 36375 and FS 36320 (Dark Ghost Gray).

P. B.



# ARTICLES OF WAR LTD.

## Dealers in Domestic and Imported Books

Articles of War Ltd. has been dealing and supplying books to collectors, historians, and modelers for over 13 years. Our stock of over 4,000 books and periodicals provides an extensive selection of domestic and foreign language reference material.

### Great reference material for:

**Aircraft  
Naval Ships  
Uniforms**

**Campaign Histories**

**Tanks—AFVs—Armoured  
Vehicles**

**Excellent for detailing and  
painting models etc.**

- \* Catalogs—lists published regularly
- \* Quick efficient service (UPS delivery)
- \* Master Card/Visa accepted
- \* New and used or out of print titles.



**Write for our FREE sample  
catalog or send us your  
want list.**



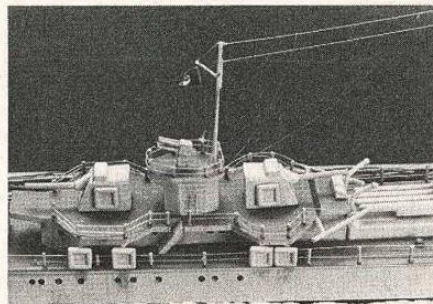
**Articles of War Ltd.**  
7101 N. Ashland Ave.  
Chicago, Ill. 60626

**Acrylic gel.** I live in Australia and can't find the Grumbacher and Liquitex acrylic gel mentioned in Dennis Moore's article "Modeling water with artist's acrylic gel" (January/February 1984 FSM). Would you please provide me with their addresses?

*Tim Vickridge*

Sure, Tim. Liquitex, Binney and Smith Inc., Easton, PA 18042, and M. Grumbacher, Inc., 460 West 34th Street, New York, NY 10001.

*Dennis Moore*



**Ship details.** How does Dennis Moore make those splendid railings on his ship models? This has frustrated me for years, mainly in getting them thin enough to be near scale.

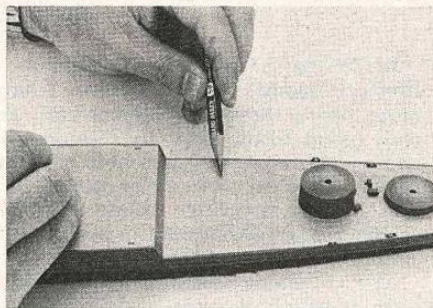
*Robert Munro*

I would like to duplicate ship deck railings and mast rigging on battleships. Is it possible to purchase wood deck planking for 1/350 scale warships? Also, what company makes a detailed 1/350 model of the U. S. S. *New Jersey* or *Missouri*?

*Bob Morris*

Answering Mr. Munro's question first, I make my railings from HO detailing wire and clear stretched sprue. I also use clear stretched sprue for mast rigging. I'll have an article on building ship railings in a future issue of FSM.

I don't think deck planking is available in wood for 1/350 scale. However, you can easily get the effect of the cracks between the planks by grazing the raised surface



plank detail with the side of a soft lead pencil. Although it looks shiny after it is applied, it will look just right after a coat of Micro Flat which also seals the pencil on the paint.

As far as the detailed 1/350 battleships go, you're in luck. Coming this year are three kits of the U. S. S. *New Jersey*; both Revell and Tamiya are making a kit of the current refit, while Otaki is doing a World War Two version. Since these kits haven't been released, I can't comment on which would be the most detailed.

*D. M.*

**Paint thinner.** Is it possible to purchase large volumes of paint thinner that is compatible with Testor enamel? *Don Martin*

I like using the Testor Model Master line when I airbrush my models. Can I buy thinner in larger quantities than those that Testor sells? *Chris Bowcock*

Mineral spirits (available in pints, quarts, and gallons at hardware stores) will work with Testor paints. Because each manufacturer's thinner may be different, you should experiment to determine the proper thinning ratios and air pressure settings for airbrushing. *P. B.*

**World War One tanks.** In Shepherd Paine's books, *HOW TO BUILD DIORAMAS AND MODELING TANKS AND MILITARY VEHICLES*, there are photos of scratchbuilt WWI tanks. Are there any kits of armor of this era?

*Ross Whitney*

I know of only three WWI tank kits: Airfix's 1/76 scale British Mk. 1 (No. 01315-2), Matchbox's Renault FT M17 (kit No. PK-176 also includes a Char B1 bis), and the Touro 1/35 scale German A7V (No. 101). Touro was one of those one-kit companies — its 1/48 scale Macchi 202 aircraft kit never materialized. There may be some vacuum-formed kits of WWI armor. Can anybody add to this list? *P. B.*

**World War One aircraft.** My favorite subject is WWI aircraft but I find 1/72 scale too small to include the detail I would like in my models. Are there any 1/48 scale WWI aircraft available? *Kevin Riant*

Yes, there were 1/48 scale kits of WWI aircraft, but few are still available. A large selection was brought out by Aurora and many of these were reissued under the K&B label. Both the Aurora and K&B box kits are now collector items and many of them command high prices. Monogram reissued some of the Aurora kits in the late '70s but even these are becoming scarce. Renwal had a few of its "Aero-skin" series in 1/48 scale as well. AMT produced a 1/48 scale D. H. 4. *P. B.*

**HO scale aircraft.** I would like to add an airport to my HO scale model railroad. Are there any aircraft kits available in this scale? *Tom Walkey*

AHM produced a limited number of classic airplanes in HO scale and these can still be found in some hobby shops. The selection is limited, though; famous aircraft like the P-26, Lockheed Vega, P-38, Ju-87 Stuka, and F-4 Phantom II are some of them.

If you're interested in a modern-day airport, your best bet would be the jetliners produced by Nitto in 1/100 scale. Even though this is a smaller scale (HO is 1/87), you might be surprised at the size of these models and adding even a corner of an airport to accommodate a 1/100 scale Boeing 747 is going to take up quite a chunk of space. If you can't find them at your local hobby shop, write ATP, Inc., 3014 Abelia Court, San Jose, CA 95121, or Empire Pacific, Ltd., 10805 East Artesia Boulevard, Cerritos, CA 90701. *P. B.*

**FSM**





The House of Miniatures invites you to build...  
**A collection of authentic  
 true-to-scale antique furniture**

Experience the personal satisfaction of creating antique *miniature* reproductions with your very own hands. Imagine the thrill of displaying classic Chippendale in your home. Showing off a Hepplewhite dining set or a Queen Anne table. These are among the world's most treasured antiques. Now you can enjoy the timeless beauty and charm of these furniture masterpieces in *miniature*—with our extraordinary museum quality kits.

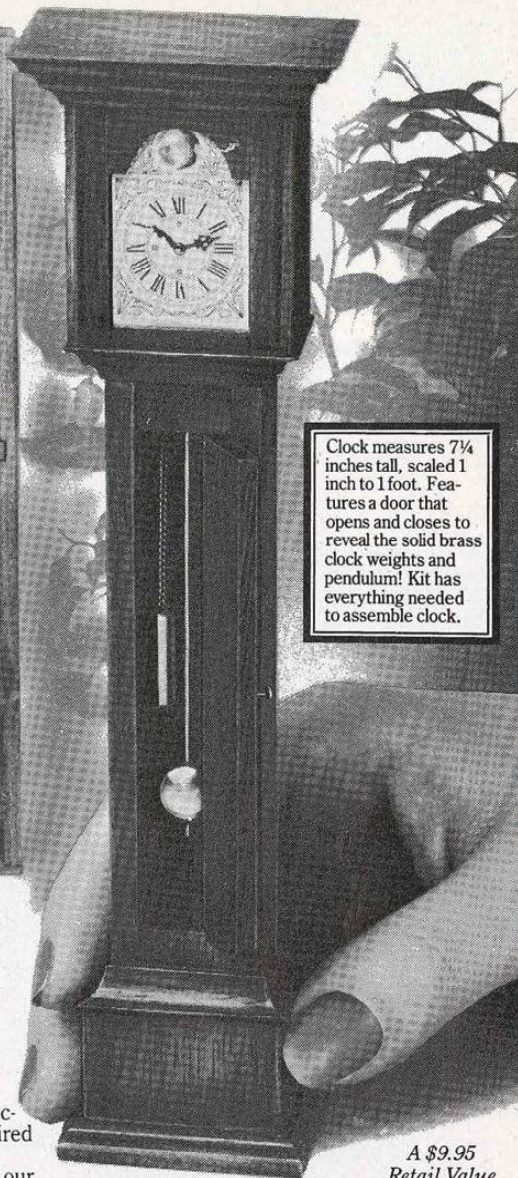
Each House of Miniatures kit is precision-scaled to 1/12 of the full-size original and cut to exact specifications. Only furniture-quality hardwood is used, and fittings and hardware are of solid brass—finished to fit perfectly.

Kits include detailed step-by-step instructions. No special tools or skills are required for assembly.

Begin your collecting adventure with our miniature reproduction of the William & Mary clock kit for only \$1 when you become a trial member of The House of Miniatures Collectors Society.

As a trial member, you will have the opportunity to purchase, *if you wish*, other museum quality miniature kits. However, you are not obligated to buy any additional kits—ever!

Remember, this William & Mary clock kit is available for \$1 by mail only. *With no further obligation on your part.* Mail coupon today!



Clock measures 7 1/4 inches tall, scaled 1 inch to 1 foot. Features a door that opens and closes to reveal the solid brass clock weights and pendulum! Kit has everything needed to assemble clock.

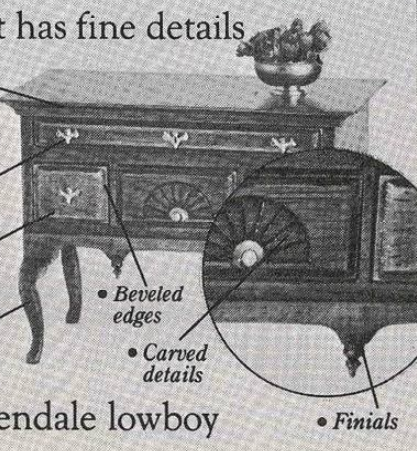
A \$9.95  
 Retail Value

**Take this  
 museum quality  
 William & Mary  
 Clock Kit for only \$1\***  
*with no further obligation*

© 1984 Craftmark Inc.

**Each kit has fine details**

- *Elegant molding*
- *Solid brass hardware with key plates*
- *Drawers that open and close*
- *Cabriole legs*



- *Beveled edges*
- *Carved details*
- *Finials*

**Chippendale lowboy**

**THE HOUSE OF MINIATURES**

Division of Craftmark Inc., 80 Newbridge Road, Bergenfield, NJ 07621

Please enroll me as a trial member of the Society and send me the William & Mary clock kit. Bill me only \$1\* If I am not completely satisfied, I may refuse delivery of the second shipment by writing "cancel me" on the shipping label. If I keep the second shipment, I will be a regular member and receive additional shipments every four weeks. Prices for each shipment, which will contain one or two kits, are \$9.95\* or less. I may return any shipment and I am not obligated to accept any minimum number.

BQ26

Mr. ☐ Mrs. ☐  
 Ms. ☐ Miss ☐

All enrollments are subject to acceptance.

Address \_\_\_\_\_

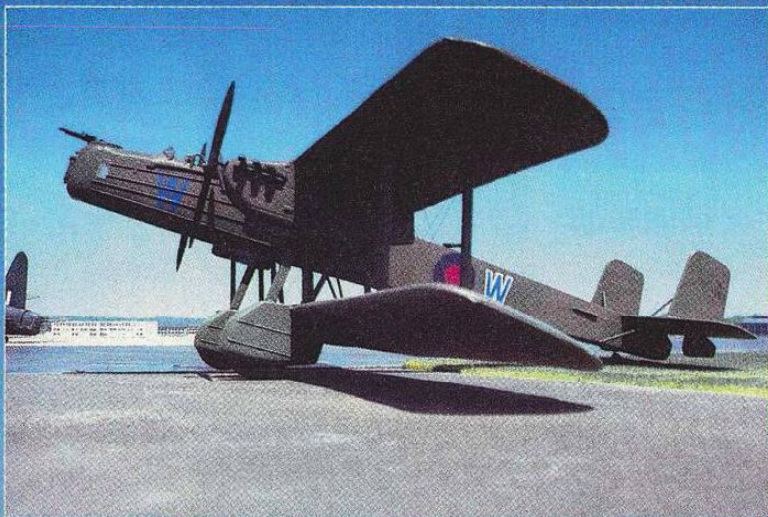
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

\*Plus shipping, handling and sales tax.

**FREE BONUS**

Professional Quality Finishing Samples Include tinted glue, oil base stain (for authentic color), glaze stain for antiquing and highlighting and other materials to professionally finish your kit to museum quality.





To emphasize the Handley-Page Heyford's unique construction I set up the cleanest possible scene. However, with a plain base the model looked too much like a model, so I "pulled the background away" from the viewer by placing SkyWave 1/700 scale hangars and barracks behind the plane. Forcing the perspective in the photo with different scales is usually possible only in large scenes, and then only when the larger scale is widely separated from the smaller one. Technically, this scene was relatively easy to photograph, since I only needed to hold the focus on the plane and the buildings.



In "Engine Test" the props on the far Stirling were spun using a can of compressed gas from Falcon Industries. This ingenious device has an accessory tube to aim the spray. The prop has to spin at just the right speed: Too fast and it disappears; too slow and it won't complete one revolution while the camera shutter is open, leaving dark bands where it started and stopped. I used model vehicles to block out several real cars in the background, and if you look closely you can see a full-size Ford LTD roof just under the distant plane.



The Stirling's "skyscraper" look resulted from raising the angle of attack of the wing for takeoff by lengthening the landing gear. Even without the long gear the plane was enormous, and the object of this photo was to capture that huge, gawky look. The figure in the shade provides a touch of life and activity. The Austin Lorry on the left is kitbashed: The cab is from an RAF fire engine, the frame and low body were scratchbuilt. The Airfix AEC Matador (right of center) was carefully positioned to block out the roof of a 1979 Lincoln.



*I backdated this Lindberg 1/48 scale Me 262 to an early prototype version. Here again the field is uncluttered to show off the form of the plane to best advantage. The Opel Blitz truck is not available in 1/48 scale, so I modified a Bandai Maultier half-track. The section of wheel on the left is a Bandai staff car, and the wing going off the edge of the photo is a Feisler Storch.*

# Realistic model photography with airfield dioramas

A gallery of World War Two photos taken just last year

BY VIC ROSEMAN

**F**OR MOST MODELERS, the model itself is the finished product or "end result," but not for me. A few years ago I was faced with a choice: I either had to stop building models altogether or find a new way to store them (they were beginning to take over my living space). My solution was to decide that my end result would be photographs of my models on realistic dioramas, allowing me to sell or give away all but my favorites (the models still overrun my living space, but at least I've been able to get them off my desk, floor, and bed).

**Modular airfield dioramas.** Having made the choice to collect photos instead of models, my next task was to come up with a means of photographing my models in pleasing and realistic settings. I decided to use a technique I'd developed for model railroad photos: The models are posed outdoors on dioramas set up in front of a full-size background. All the shots in this article were made this way.

The dioramas are made from identical 1' x 2' 1/4" Masonite hardboard panels. For shooting, they are arranged on top of a pair of 2' x 4' sheets of the same material, which in turn rest on 1" x 2" pine furring strips. These are in turn supported by four tripods, Fig. 1, although a pair of sawhorses could do the same job.

Each of the 1' x 2' panels is landscaped with part of an airfield. One panel has scribed and painted concrete sec-

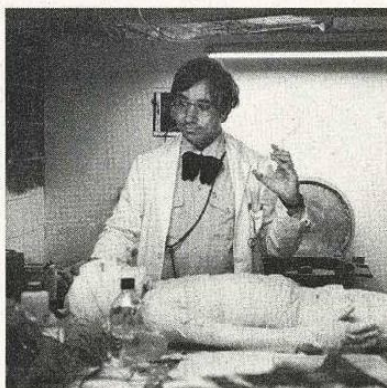
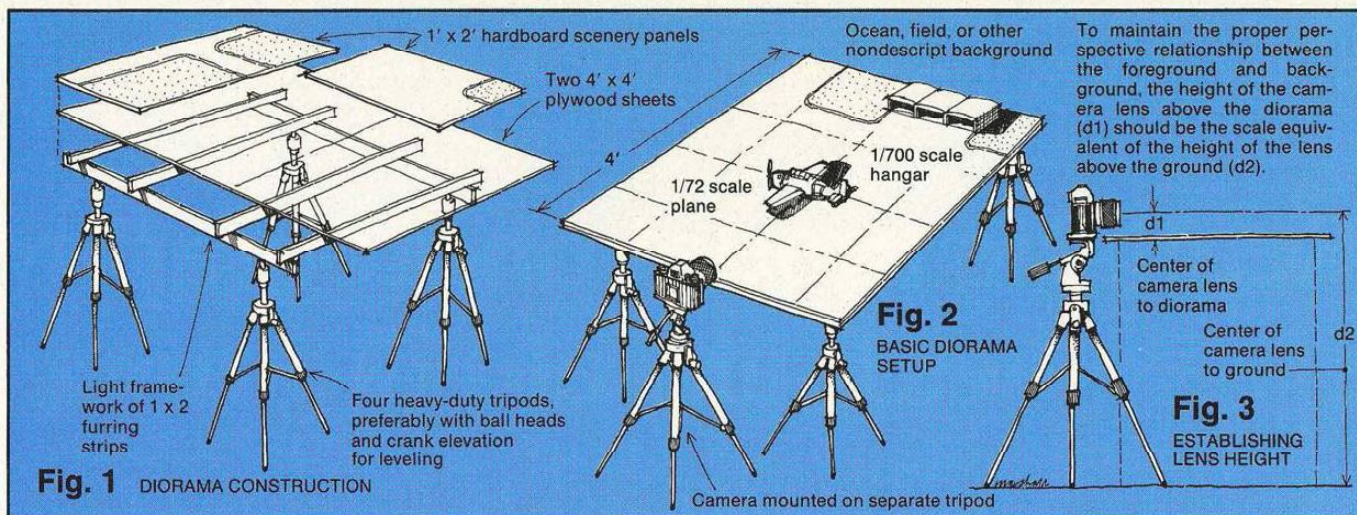
tions to represent a landing strip, another is coated with "grass" (I use the electrostatic variety available in model train shops), and some have combinations of these surfaces. Because the panels are all the same size and shape, they are modular, which means I can arrange them in different configurations to vary the look of my photos.

For shooting, the platform and panels are set up in a wide open field at a farm, beach, park, or airfield, Fig. 2. The technique makes use of the perspective generated by having the full-size objects in the background very far away; any nearby background objects will dwarf the planes and spoil the effect.

**Camera, planes, and props.** The type of camera is not particularly important. I use a 35 mm single-lens reflex with through-the-lens viewing. What is important is that the camera be mounted on a tripod. To ensure the proper perspective relationship between the model foreground and the real background, position the lens so that its center is exactly the same *scale* distance above the diorama surface as its real distance above the ground the tripod is standing on, Fig. 3. Measure to make sure, because even a small error can ruin the impression of a real airfield that we're out to create.

Most of the planes in the photos are popular 1/72 scale kits with only a few changes from their out-of-the-box ap-





## Meet Vic Roseman

Vic lives in New York City, where he is an instructor of fine arts. He holds a master's degree from Pratt Institute in New York, and he has also worked as a photographer for the New Jersey Historical Society in Newark, New Jersey.

Vic reports that he "has been involved in model building since he was a teenager." He's built both flying and solid model planes, as well as trains. Several of his articles have appeared in *MODEL RAILROADER* magazine, and he has written two books, one of them a soon-to-be-released volume on locomotives of the Central Railroad of New Jersey.

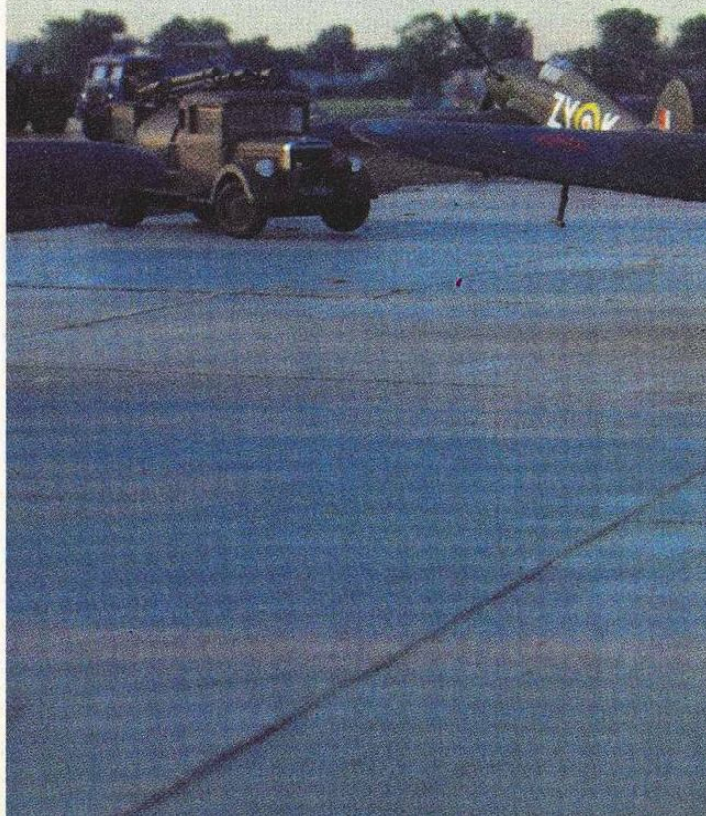
Vic told FSM that a lot of the credit for his aircraft photos goes to his assistants, Frank, Will, Kent, Andy, John, and Don.

pearance. Even more important than the planes from the point of view of achieving realism is the careful selection of the details and accessories arranged around the aircraft. Before I shoot (in fact, before I build the model!), I decide how I would like the photo to look: Will that B-17 be landing on a tropical island with palm trees? Or will it be one in a whole line of planes ready for takeoff from England? Would this be a good subject for a servicing scene? Deciding on the scene determines what vehicles will be used with the aircraft, and I research the vehicles every bit as carefully as the planes (sometimes more carefully!).

This modular diorama technique is not the only way — or even the best way — to take effective model photos, but these methods have worked for me. I'm always tickled to see a new model photo technique, and whenever I read about a new one that looks interesting I give it a try. I hope you'll give this one a try with your own models, especially if they're threatening to take over your house or apartment!

**FSM**

"Flight Line 247" was shot in late afternoon. Most photo books say to stop shooting at least an hour before sunset because the light becomes too red. That's true, but the shots that do come out have fantastic color. The fuel truck on the left contrasts with the planes and tells the viewer that the planes are being serviced. Its position is casual, not posed, as if it simply happened to be there while the photo was taken. The planes are 1/72 scale Hurricane IIs from Heller, and I backdated some of them to the I version for this scene. The markings include "HP" and "ZY" because 247 Squadron changed code letters at about the time they got their Hurricanes. According to an RAF mechanic who worked with 247, it was possible to see both sets of letters at the same time. I kitbashed the Albion fuel bowser from the cab and chassis of a Wiking 1/80 scale Mercedes truck and an ABS tubing tank. Like all photos in this article, this one is a 35 mm Kodachrome slide.





Here I used 1/144 scale Lancasters in the background to force the perspective and enhance the illusion of depth. The foreground models are 1/72 scale.

Repeating the same forms is a technique from painting. The staff car barely visible at the left is a "Wanderer" in 1/87 scale from Brekina. The Preiser figures and tractor add life; without them the scene would be static (and dull). An important point about props is that you shouldn't use the same ones over and over. Some model railroad photographers put one automobile in every photo and call it "the photographer's car," but if you do this with planes, it looks as if all your photos were taken at the same airfield on the same day.



The Lancaster in the middle of the photo is the subject here, but the wing and shadow on the left establish the point of view. The vehicles and small clusters of figures help create a busy, but quiet, mood. The tan fuel truck is an Airfix AEC Matador. The "secret" in holding the focus on both the models and the distant background is in stopping the lens down to the smallest aperture (lens opening, or "f-stop"), and compensating with a long exposure, of ten several seconds.





# Modeling the Soyuz spacecraft

Accurizing Revell's 1/96 scale Russian orbiter

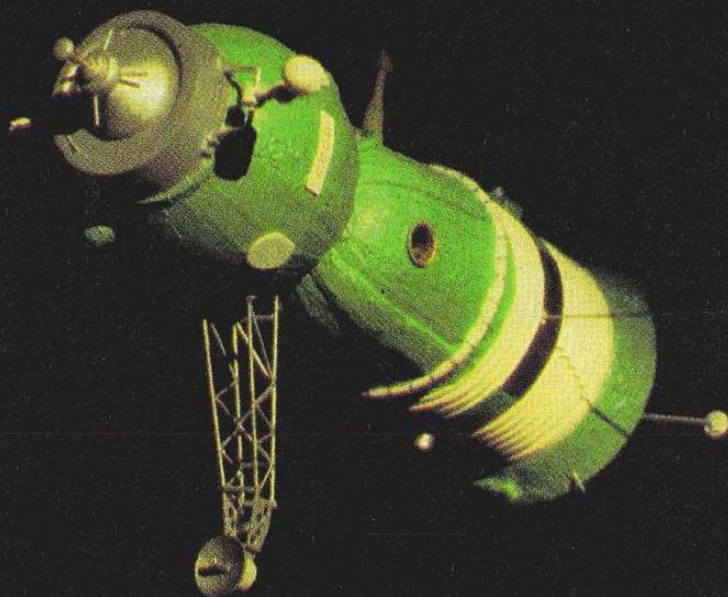
BY MIKE MACKOWSKI

**T**HE SOYUZ SPACECRAFT has been the mainstay of the U.S.S.R.'s manned space program since the 1967 flight of Soyuz 1. Initially an orbital research vehicle for the Soviet manned lunar landing program, Soyuz has also served as a scientific research platform, a participant in the Apollo-Soyuz Test Project (ASTP), and most recently as a ferry vehicle to the Salyut space station.

Three sections make up the Soyuz spacecraft, Fig. 1. The orbital module is the somewhat spherical forward section that includes the docking apparatus and external hatch. The command module is the center section containing the couches where the cosmonauts sit during launch and reentry. The equipment module is the cylindrical aft section holding support and propulsion systems, and the solar arrays when used.

Several variants of the basic Soyuz have been flown by the Soviets; most of the differences involve changes in the number of crew members or in certain subsystems (different fuel tanks, solar arrays, docking mechanisms, and so forth). This article will describe the five most important variants: the early three-man version, used in Soyuz flights 1 through 9 for initial rendezvous tests; the ASTP version, sporting an androgynous docking system and different solar panels; the Salyut ferry, featuring a two-man crew but having no solar panels; the Progress automatic unmanned tanker/freighter vehicle; and the Soyuz-T, an updated, 3-man, solar-array-equipped version for the Salyut ferry missions.

**Modeling Soyuz.** There have been only three kits of the Soyuz spacecraft: the crude 1/144 version included with the Airfix Vostok launch vehicle, a rare 1/30 scale kit from the Soviet Union, and the Revell 1/96 scale kit of the 1975 Apollo-Soyuz mission. The Revell kit featured the same inaccurate Apollo spacecraft from its lunar landing kits, a docking module, and a Soyuz. The androgynous docking system is incorrectly shaped, too large, and poorly detailed, but can be corrected. The Soyuz itself is acceptable, although the detailing is a little crude. For instance, the antennas are much too beefy, the coolant loops around the propulsion



Mike modified his Revell model into a Soyuz ferry spacecraft. Note lack of solar array panels. The scratchbuilt antenna mast shows well in this simulated orbital view.



module are too prominent and should extend farther back, and the solid ring around the command module should really be a series of 44 small T-shaped antennas.

In modeling any of the Soyuz variants using the Revell kit, the basic spacecraft parts provided (the two fuselage halves plus the rear flange) can be used with modification. The coolant lines around the rear of the equipment module should run all the way to the rear flange as shown in the drawings. An umbilical cable should be added to connect the propulsion and orbital modules as shown in Fig. 2, and two additional windows are needed in the orbital module.

The outer surfaces of all versions feature a green, cloth-like thermal insulation blanket covering all of the two forward modules and parts of the propulsion module. To simulate this material, I painted crinkled aluminum foil, Fig. 3, with a mixture of 11 parts Pactra X-5 Leaf Green and 10 parts X-43 Turquoise, producing a flat jade-green. The equipment module was white around the radiators, with small patches of gold and bare metal, Fig. 4. The area in the rear face around the thrusters was bare metal, with green thermal material around the periphery.

To build an early Soyuz only the three main pieces of the spacecraft proper were used. I built a new set of antennas, along with "gull-wing" solar panels and a new docking mechanism. The antennas were made from stretched sprue, wire, bits of plastic, and items from my spare parts box. I prefer wire to sprue as it is less fragile and already has the desired metallic color. Many of these antennas are also used on the ferry and Progress variants, Fig. 5.

For the rendezvous radar tower, I laid the wire and sprue pieces on a copy of the drawings, Fig. 6, built up a pair of side frames, and connected them into a three-dimensional structure with additional wire and sprue pieces. The an-

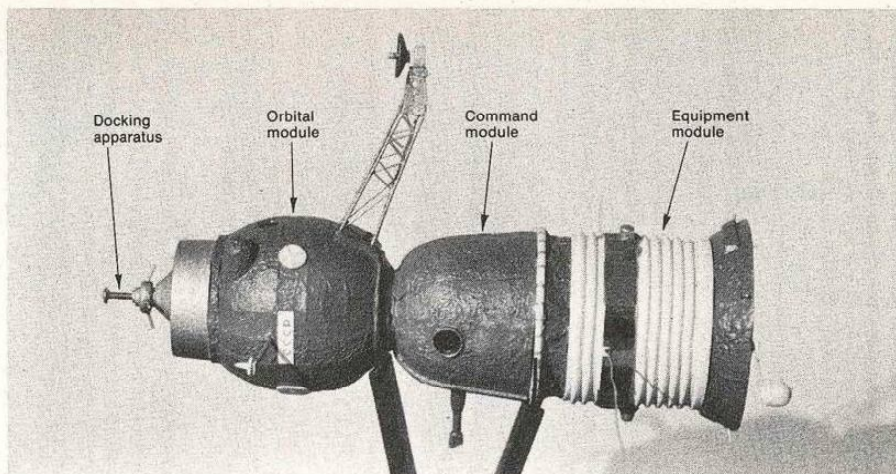


Fig. 1. The Soyuz spacecraft had three main components.

tenna assembly was built up separately and attached to the trusswork before the completed tower was put on the model.

The docking probe was built from a straight pin, metal tubing of various diameters, and bits of plastic. I made the fairing at the forward end of the orbital module from the flared end of a Krazy Glue case (not the glue container, but the white tube it was packaged in). A shorter length of this tube can be used for the docking collar in the Soyuz ferry version.

The solar panels were made from sheet plastic, with lightly scribed structural detail on one side and scribed solar cells on the opposite side. The cells should appear as a fine pattern of squares, painted a deep glossy metallic blue. Alternatively, I have found that exposed blank 35 mm slide film makes a nice simulated solar cell array. It's not exactly the right color (too black), but it scribes easily and has a nice glossy surface, eliminating one step of painting.

To get the gull-wing kinks in the array substrate, I scored and bent the plastic to the angles shown in the

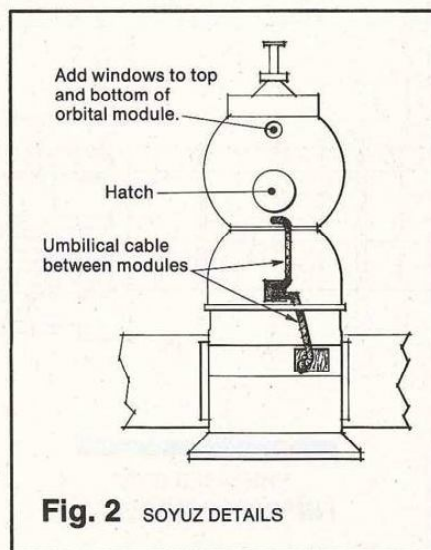


Fig. 2 SOYUZ DETAILS

drawings. Next, I ran a bead of Krazy Glue (or any cyanoacrylate adhesive) along the score. This permanently sets the kinks into each wing. I painted the panel structure flat white.

A balsa and putty Toroidal fuel tank, Fig. 7, was added to the flange on the kit to make the early Soyuz. The exact



Fig. 3. Mike applied aluminum foil to simulate the thermal blanket that insulates the spacecraft.

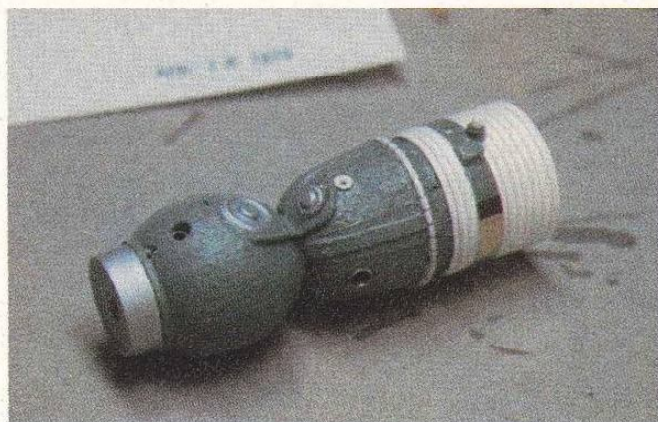
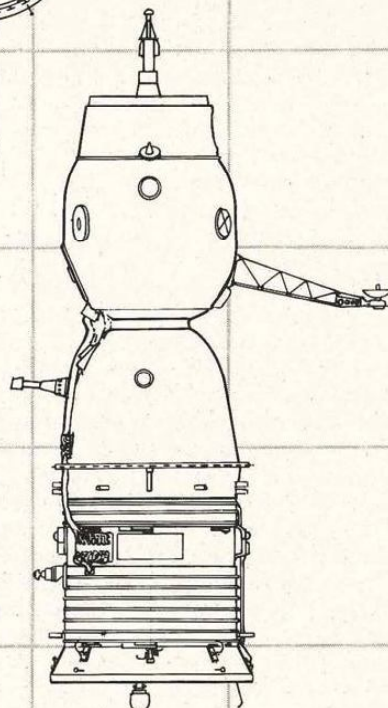
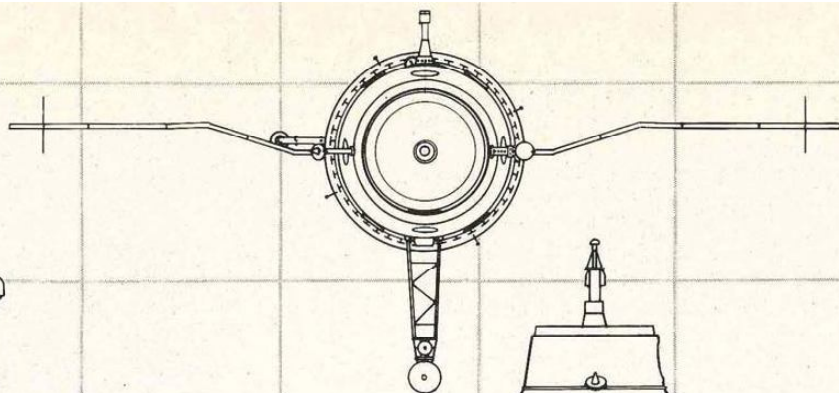
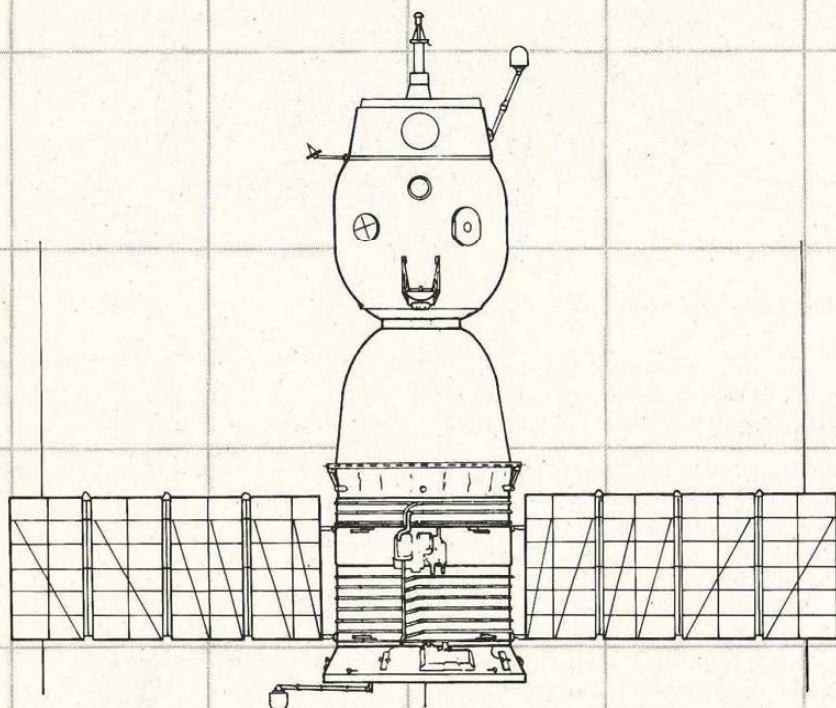


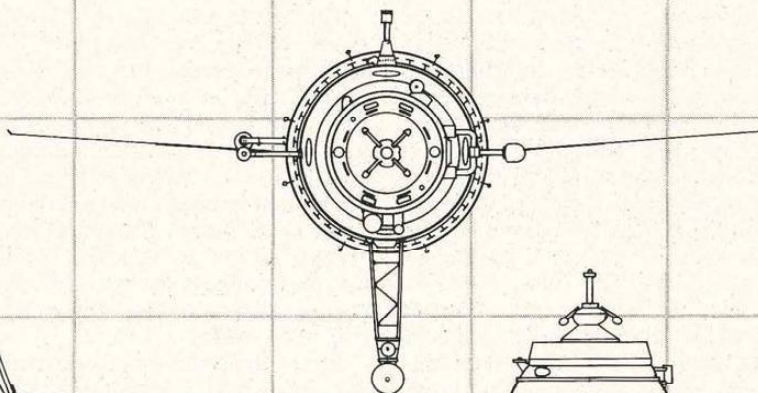
Fig. 4. The painted model. Note the umbilical cord and added windows. Radiator area has a few patches of bare metal and gold.



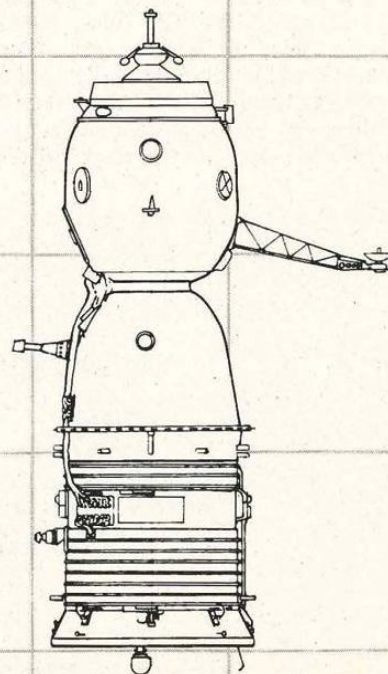
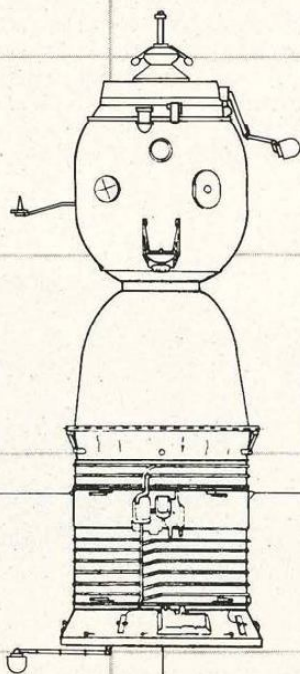
EARLY SOYUZ



PREPARED FOR  
**FINESCALE MODELER**  
BY  
**Mike Mackowski**



SOYUZ FERRY

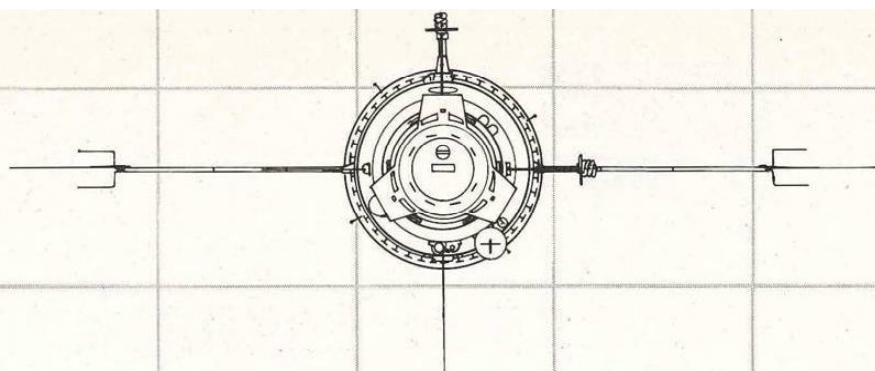




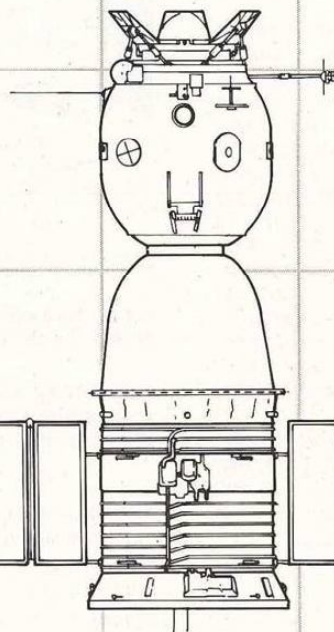
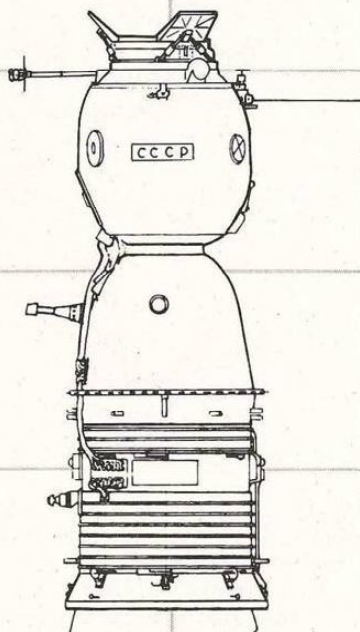
# SOYUZ SPACECRAFT

Overall length:\* 26.1' (7.94 m)  
 Length of body: 22.9' (6.98 m)  
 Maximum diameter: 8.92' (2.72 m)  
 Array span:\* 34.8' (10.6 m)  
 Interior volume: 317.8<sup>-3</sup> (9 m<sup>3</sup>)  
 Crew: two or three  
 Weight:\* 15,100 lbs. (6850 kg)

\*Data for Soyuz T version

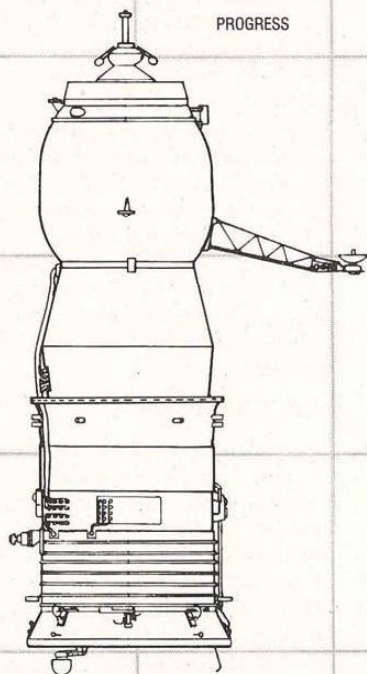


ASTP SOYUZ

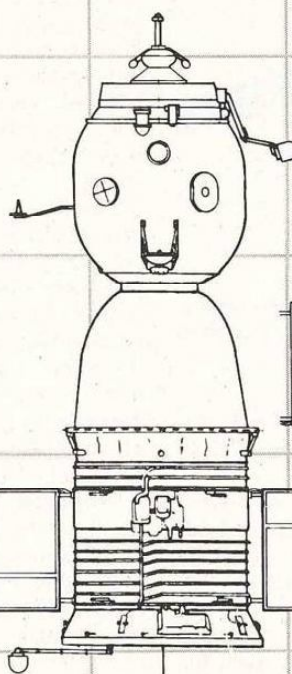


1/96 SCALE

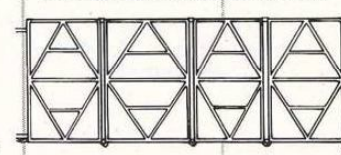
PROGRESS



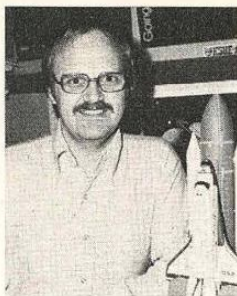
SOYUZ T



UNDERSIDE STRUCTURE OF SOLAR PANEL





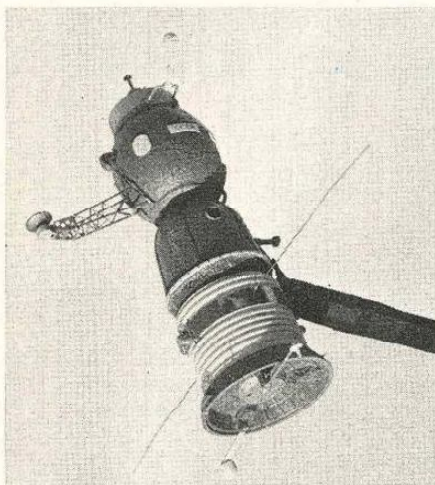


## Meet Mike Mackowski

Mike is an electrical engineer at the McDonnell Douglas Astronautics Company in St. Louis, Missouri. His two favorite interests are modeling and space exploration, and every once in a while they unite in a project like the Soyuz model in this article.

Mike has been building models since he was a youngster and builds model spacecraft and USAF jets, particularly prototypes and experimentals. His models have won regional and national IPMS awards. Mike serves as editor of *Scale Spacecraft Newsletter* and *Crazed Plastic*, the quarterly magazine of the Gateway chapter of IPMS/U. S. A.

Mike's wife Maura is also an aviation fan and even his baby daughter Katie has been to a couple of air shows and IPMS meetings.



Now Revell's model is an accurate replica of a Soyuz ferry spacecraft. Note stretched sprue and wire antennas.

shape or a smooth finish was unimportant because it was covered with the green insulation blanket.

The ASTP version required corrections to the kit's docking petals and additional antennas. You might consider replacing all of the kit antennas with sprue or wire.

**Salyut missions.** Three versions of the manned Soyuz have been used for missions to the Salyut space stations.

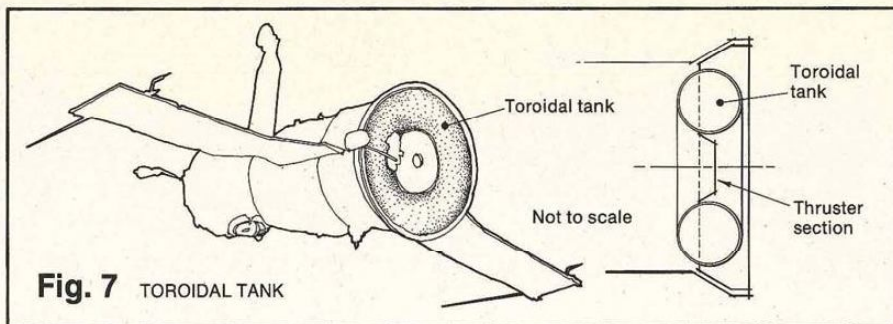


Fig. 7 TOROIDAL TANK

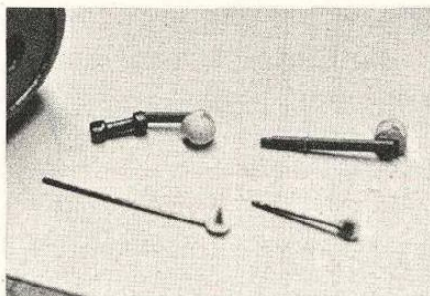
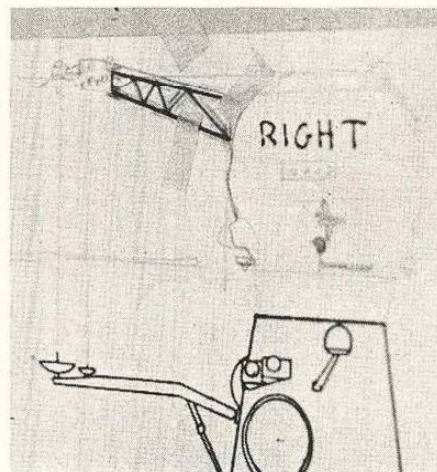


Fig. 5. Stretched sprue, wire, and bits of plastic made up the small antennas.

Fig. 6. Mike used the scale drawings to scratchbuild the antenna mast from bits of wire and stretched sprue.



Through early 1977 (Salyut 5 flights), the Soyuz ferry vehicles had solar panels and a new docking system. This docking mechanism allowed for crew transfer in addition to a simple mechanical connection of the vehicles.

The subject of the model in the photos is a later improved Soyuz ferry which was used through Soyuz 40 in 1981. The solar arrays were removed on this version because the ferry flights to the space station were short enough to be made on battery power alone. However, several flights had problems during the rendezvous phase, and the limited flight duration caused the crews to give up and return to Earth before they were able to dock with the Salyut.

Since then, the Soviets have upgraded the vehicle to the Soyuz-T variant ("T" for Transport) featuring a new computer system, a modified fuel system, and a new set of redesigned solar panels. The Soyuz-T has incorporated the solar arrays again to allow more flexible operations. So, except for the docking mechanisms and solar panels, all three ferry versions have a nearly identical external appearance.

**Progress.** In January 1978 the Soviets flew the first Progress spacecraft, an unmanned version of the Soyuz vehicle. The Progress can automatically rendezvous and dock with the Salyut space station to bring up fuel and supplies. The command module was replaced by a more angular refueling

module, while the forward module was retained as a pressurized cargo hold (without windows).

This version can easily be modeled by reshaping the Revell kit's command module with bits of plastic and putty. The overall size is about the same as a Soyuz, and the Progress features the same green thermal blanket and antenna complement as the late-model Soyuz-T craft. There are some changes to the aft equipment module, primarily in the arrangement of the coolant lines and radiator area. These changes, along with the lack of solar arrays, are evident in the drawings.

Little has been published on the external appearance of Soviet space hardware. I have been following their program for quite some time, and a few of the most useful publications are listed below. I hope I've been able to condense the information from these sources into a form useful to modelers who might want to work on this unusual subject.

FSM

## REFERENCES

- *Apollo Soyuz Test Project Fact Sheet*, NASA Release No. 74-196.
- Froehlich, Walter, *Apollo Soyuz*, NASA Ep-109.
- Gatland, Kenneth, *The Illustrated Encyclopedia of Space Technology*, Harmony Books, New York.
- Johnson, Nicholas L., *Handbook of Soviet Manned Space Flight*, American Astronautical Society, San Diego.



INTERNATIONAL  
MODELERS SUPPLY CO.

# CATALOG \$1.50

WE HAVE ONE OF THE  
LARGEST SELECTIONS OF  
KITS IN THIS AREA

477 ELIZABETH ST.  
SUITE 601  
BURLINGTON, ONTARIO  
CANADA L7R-2M3

## IN OHIO...

...Adult modelers  
shop with us.

ARMOR • AIRCRAFT  
DECALS • BOOKS  
TOOLS • MINIATURES  
FOREIGN MAGAZINES



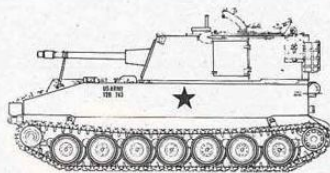
STRETE HOBBIES



3655 Sullivant St., Columbus, OH 43228

**APC HOBBIES**  
**BOX 122**  
**EARLYSVILLE, VA. 22936**  
**M C/VISA**  
**PHONE 804-9732705**

**mail order  
catalog \$1.00**



**M-108**  
**105MM HOWITZER**  
**1:35 scale \$12** POSTAGE 1.50 per order

## VACUFORMS



WHITE EAGLE BEECH C-45  
1/72 BOEING B-50D \_\_\_\_\_ 21.95  
1/72 BOEING C-97 STRATOFREIGHTER \_\_\_\_\_ 22.95  
1/72 BOEING KC-97L TANKER \_\_\_\_\_ 22.95  
1/48 BEECH C-45 \_\_\_\_\_ 18.95

SHEET STYRENE-WHITE  
24 (.020) INDIVIDUAL PRE-SCRIBED PIECES  
FOR MATTEL VAC-U-FORM \_\_\_\_\_ 3.00

SHEET STYRENE-WHITE  
4 (.020), 2 (.040) 6 5/8" x 7 5/8" SHEETS 3.00  
FOR CATALOG SHEETS, SEND SASE.

POSTAGE & HANDLING  
UP TO \$20.00 \_\_\_\_\_ \$2.00  
\$20.00 & UP \_\_\_\_\_ \$2.50  
MICHIGAN RESIDENTS ADD 4% SALES TAX



WHITE EAGLE VACU-FORM  
P.O. BOX 1834  
DEARBORN, MICHIGAN 48121

# NOTICE

**BEWARE OF COUNTERFEIT OR BOOTLEG  
HASEGAWA KITS!**

**GENUINE MINICRAFT IMPORTED AND WARRANTED  
HASEGAWA MODELS CARRY THIS "Inspected" LABEL  
ON ONE BOX END-FLAP.**


The box end-flap carrying this red and white label is your proof-of-purchase to be submitted with a parts request should you find a part missing, broken or even accidentally damaged in assembly. Parts requests for warranted kits will be handled at no cost to the buyer.



Interested in our two 1984 full-color catalogs? Send \$4.00 to  
MINICRAFT MODELS, INC., P.O. Box 3577, Torrance, CA 90510



48 LINES OF  
HOBBY PRODUCTS  
SOME ARE . . . **FREE**  
SEND LONG SASE (40¢ stamps)  
FOR INFORMATION PACKET TO:  
BARGAINS GALORE  
BOX 3151 LA HABRA, CA 90631

**BARBED WIRE**  
  
3/24 in. pcs. \$1.25 ea. + 50p.  
**THE ROCK QUARRY** ★  
3705 Knight La., Garland TX 75042

**TRAMP STEAMER**  
Detailed Scale Model  
for information write  
**HERITAGE SHIPBUILDERS**  
Box 494 • Lathrup Village, Mich. 48076

**AIRLINERS**  
Slides/Postcards/Books/Shirts  
Send \$ US for lists.  
**AeroGem**, Dept. B, Box 290445, Davie, FL 33329

QUALITY 35mm AVIATION  
TRANSPARENCIES   
including:  
military, civilian, homebuilt, antique, and museum/display  
**AVIATION PHOTOGRAPHICS**  
P.O. BOX 717 DEPT. FS  
CHESAPEAKE BEACH, MD. 20732 USA  
Send \$100 for  
current list  
and sample slide

**Styrene...  
Fast, Accurate,  
Versatile**

Use precut styrene strips and  
sheets on your next project.

**evergreen  
scale models**

Send SSASE to Dept. 128 for info  
1414-127th Pl. N.E., Suite 107  
Bellevue, Washington 98005

**Free catalog!**



**"Hard-to-Find Tools"**

Our extraordinary tools are  
made to do the job right, sav-  
ing you time, effort and money,  
and they're guaranteed for life.

Send me Brookstone's FREE  
68-page tool catalog.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_

**Brookstone**  
70 Vose Farm Road, Dept. 1140A  
Peterborough, New Hampshire 03458

## FSM BOOK BRIEFS

FINESCALE MODELER invites publish-  
ers to submit review copies of books and  
magazines related to modelbuilding.  
Send all material to FSM Book Briefs,  
FINESCALE MODELER, 1027 North Sev-  
enth Street, Milwaukee, WI 53233.

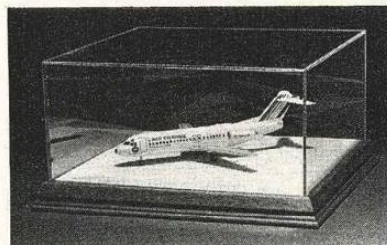
BY BURR ANGLE

### Airbrushing

This 166-page, 7 3/4" x 9 1/4", soft-cover book  
by Carl Caiati contains 230 black-and-white  
photos, plus 16 pages of color artwork. It is a  
beginner's guide to choosing, maintaining,

and using an airbrush and it concentrates  
on the airbrush as a tool—the author  
states that such concepts as composition,  
perspective, color, and design have been  
covered in other works.

More Book Briefs on page 68



Introduced at 84 I.P.M.S.  
National Convention

### SQUARE BASE SIZES—LxWxHt.

6x6x3	6.95	14x14x7	19.95
7x7x3 1/2	8.25	16x16x8	23.95
8x8x4	9.50	18x18x6	24.95
9x9x4 1/2	10.95	20x20x6 1/2	29.95
10x10x5	12.95	22x22x7	34.95
11x11x5 1/2	13.95	24x24x8	39.95
12x12x6	14.95		

Water look base available for ship models  
Mirror bases and backs available for all size cases  
UPS-Shipping: up to 15.00 add 2.50  
above 15.00 add 3.50

Satisfaction or your money back

## S. A. E.

### Quality Model Cases

DESIGNED FOR MODELERS

Cover made of Acrylite® high quality plastic—

**Lightweight:** half the weight of glass

**Break resistant:** many times that of glass

**Clearer than glass:** will not turn yellow

**Edges are cut 45° for easy assembly**

Base made of Fine Wood

and Foam Core Board

### RECTANGLE SIZES—LxWxHt.

9x4 1/2 x4 1/2	7.95	16x8x8	17.95
10x5x5	8.95	18x6x4 1/2	15.95
11x5 1/2 x5 1/2	9.95	18x9x6	17.95
12x6x4	9.95	18x9x9	20.95
12x6x6	11.95	20x10x6 1/2	20.95
14x6x4 1/2	12.95	20x6 1/2 x6 1/2	17.95
14x6x6	13.95	22x11x7	23.95
14x7x7	14.95	22x7x7	19.95
16x5x5	12.95	24x8x8	23.95
16x8x5	14.95	24x12x8	27.95

### S.A.E. Displays

3804 Priest Lake Drive

Nashville, TN 37217

1-615-367-9057

Visa and Master Card Accepted

## The Parts Department

A DIVISION OF MCKEAN MODELS

**Who has the  
nicest parts?**

Next to Rhonda are the latest 1/25  
releases from McKean Models'  
Parts Department: Rectangular  
Slamlocks (8 for \$1.50), Intake/  
Discharge Covers (2 large,  
6 small, \$1.50) and Pump Panel  
Gauges (2 large, 6 small, \$1.50).  
Check your hobby shop, or add  
\$.75 postage per order, direct  
from:

McKean Models  
707 E. 41st St. #236  
Sioux Falls, SD 57105



Round slamlocks - 8 for \$1.50



"Gotcha agin..."



# ROCO MINITANKS

352S M1 Abrams  
Battle Tank



220 USA/BW/Nato  
M48 A1 Battle Tank



282 LKW 0.25 t M151  
Kaiser. USA

For Your Landscaping Needs:



Static  
Spray  
Grass  
\$3<sup>00</sup>  
Refill Pkg \$1<sup>00</sup>



Water —  
Tru Blue, cut it  
to size, for  
lakes, rivers  
Roll \$5<sup>00</sup>



Trees, Hedges, Bushes,  
Realistic Grass Roll and  
much more. Full color, 100 page  
catalog \$3<sup>00</sup>

Send \$3<sup>00</sup> for Illustr. Collector's Catalog  
1/87 (HO) Scale - over 500 diff. vehicles  
in stock. Prompt shipments.

## AAA HOBBIES

DEPT FS, P.O. BOX 2908  
CHERRY HILL, N.J. 08034  
Importers and Distributors  
Dealer and Distributor Inquiries Invited

## ATTENTION RACE FANS:

If you are a collector, a builder, or a driver  
of model cars, you cannot do without.....

REH's MODEL CAR RACING PARTS LIST &  
REFERENCE MANUAL "FOR HO 1/32 and 1/24  
SCALE SLOT CAR RACING" FOR ONLY \$6.95.

Everything manufactured in the slot racing industry today, and a few of yesterday's items that are still available, is listed in this great catalog. Tools and hobby supplies--it's all here! Over 50 manufacturers price lists! Pick up a copy at your local hobby shop or raceway. Or send \$6.95 today to REH and we'll include the name of a hobby shop and/or raceway closest to you, where you can purchase model car racing parts and supplies. It's a wonderful hobby/sport.

MAIL THIS COUPON TODAY TO  
REH DISTRIBUTING  
4415 MARBURG AVE.  
CINCINNATI, OH 45209

Please send me your Model Car Racing Parts  
List & Reference Manual for \$6.95.

My interest is in: ☐ HO ☐ 1/32 ☐ 1/24

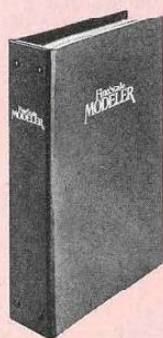
Name

Address

City

State  Zip

## FOR YOUR BACK ISSUES OF FSM . . .



Keep your copies of FINESCALE  
MODELER safe and ready to use  
in these attractive and  
durable binders.

\$6.95

Prices subject to change.



FINESCALE MODELER binders are a superb way to keep your collection of FSM neat and handy! Each binder is manufactured to our strict specifications and is doubly reinforced for long life. FINESCALE MODELER binders are finished in an attractive brown vinyl and accented by gold stamping. And FSM binders open flat just like a bound book for easy reference. Order the binders you need today!

**EACH BINDER HOLDS 12 ISSUES!**

## BINDERS

DEPT. 38653

KALMBACH PUBLISHING CO.

1027 N. SEVENTH ST., MILWAUKEE, WI 53233

Enclosed is \$  for  FINESCALE  
MODELER binders at \$6.95. Include for  
postage and handling: U.S., \$1; foreign  
\$1.50. Wisconsin residents add 5 per cent  
sales tax.

Charge to: ☐ MASTERCARD ☐ VISA Exp. Date

Card Number

Signature

Name

Street

City, State, Zip

© 1984 Kalmbach Publishing Co.



# FineScale MODELER

## SWEETSTAKES

**GRAND  
PRIZE**

**A MODELER'S COMPLETE DREAM**

Plus these superb prizes:

Drawings in January and March!

**FIRST  
PRIZE**

### THE ULTIMATE AIRBRUSHING OUTFIT!

2 prizes awarded!

**OUTFIT INCLUDES:** Badger Model 150 airbrush kit • Binks Wren airbrush set • Intermatic air compressor with tank • Hobby\*Vent III spray booth and vent kit • Air regulator, filter, and gauge • 12 paint bottles • Spray respirator • Airbrush paint filter • and more!

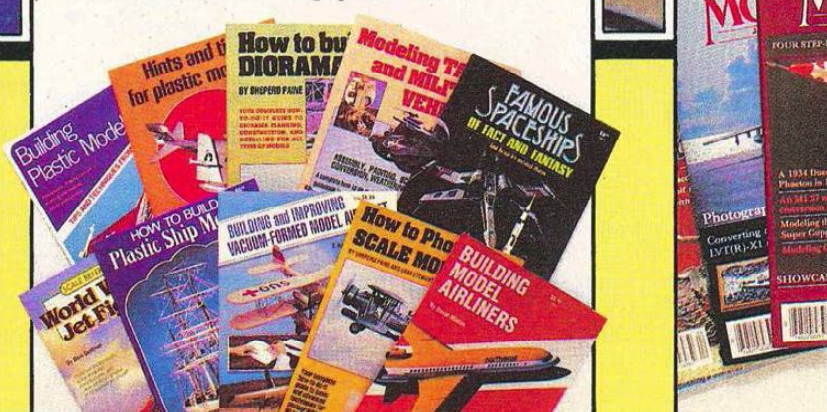
**SECOND  
PRIZE**

### 10-BOOK SET OF KALMBACH SCALE MODELING BOOKS!

6 prizes awarded!

**BOOKS:** Building Plastic Models • Hints and Tips for Plastic Modeling • How to Build Dioramas • Modeling Tanks and Military Vehicles • Famous Spaceships of Fact and Fantasy • World War Two Jet Fighters • How to Build Plastic Ship Models • Building Vacuum-Formed Model Aircraft • Building Model Airliners • How to Photograph Scale Models

**THIRD  
PRIZE**





# Here's your opportunity to WIN a modeler's dream workshop!

## WORKSHOP!

Grand Prize drawing in March 1985

### TOOLS AND ACCESSORIES:

- Work bench • Adjustable stool
- Magnifier lamp • Intermatic air compressor with tank
- Badger Model 150 airbrush kit
- Binks Wren airbrush set
- Hobby\*Vent III spray booth and vent kit
- Air regulator and filter
- 12 paint bottles • Spray respirator
- Dremel Moto-tool with 30 accessories
- Dremel speed control
- Robart paint shaker
- Sherline 4000 lathe • Sherline vertical milling column
- X-acto deluxe knife set
- 100 #11 blades
- Zona 3-in-1 saw set • Needle files
- Drills set • Pin vise
- Tweezers • Jeweler's saw
- Miter box • 5" dial caliper
- Goggles • Set of Murphey's rules
- Set of 116 Polly S paints
- Set of 88 Testors Model Master paints
- Set of 69 Tamiya Acrylic paints
- Set of 18 Metalizer paints
- Model Master brushes
- Complete Micro-System (10 bottles)
- Pacer Zap glues • Tenax 7R
- Squadron Green Putty
- AND MORE!

## 5-YEAR SUBSCRIPTION TO FINESCALE MODELER!

10 prizes awarded!

**E**nter the FINESCALE MODELER Sweepstakes and you may win a modeler's dream workshop...or the ultimate airbrushing outfit...or a valuable set of 10 Kalmbach scale modeling books...or a 5-year subscription to FINESCALE MODELER!

Just imagine a modeler's dream workshop, complete with work bench, a variety of modeling hand tools, lathe with accessories, two airbrushes, air compressor, assortment of paints, drills set, and much more, right in your home! That's what you, as the grand prize winner in the FINESCALE MODELER Sweepstakes, could enjoy.

And in two drawings, in January and March 1985, we'll be awarding other superb prizes! You could win the ultimate airbrushing outfit, with single- and double-action airbrushes, compressor, spray booth, and a complete selection of accessories. Or you could receive

a valuable set of 10 Kalmbach scale modeling books. Or you could win a 5-year subscription to FINESCALE MODELER!

And here's the best news of all: You can use the Official Entry Form found in this issue to enter the Sweepstakes – and to assure yourself of receiving America's quality scale modeling magazine year-round! Subscribe to FINESCALE MODELER now, and you'll enjoy all the challenges, all the intrigue, all the satisfaction of scale modeling. You'll discover scale modeling tips and techniques, how-to-do-it modeling projects, product news, and accurate research data! If you're already a FINESCALE MODELER subscriber, use the form to enter the Sweepstakes and take this perfect opportunity to renew or extend your FSM subscription!

Enter the FINESCALE MODELER Sweepstakes – and subscribe to FSM!

## OFFICIAL SWEEPSTAKES RULES

1. To enter, complete and mail the FINESCALE MODELER SWEEPSTAKES OFFICIAL ENTRY FORM (enclosed in this magazine) or a facsimile. Be certain that your name, address, and phone number are listed correctly. You need not subscribe to FINESCALE MODELER to be eligible to win. No purchase necessary.

2. Entries are limited to one per-person for the January 1985 drawing and one per-person for the March 1985 drawing. To be eligible for January prize awards, entries must be postmarked by December 31, 1984; to be eligible for March prize awards, entries must be postmarked by February 28, 1985. First, Second, and Third prizes will be awarded in January and March 1985. Grand prize will be awarded in March 1985. January prize award winners will become ineligible for First, Second, and Third prize awards in March drawing, but will be eligible to win the grand prize. All entries qualified under these rules will be eligible for the grand prize.

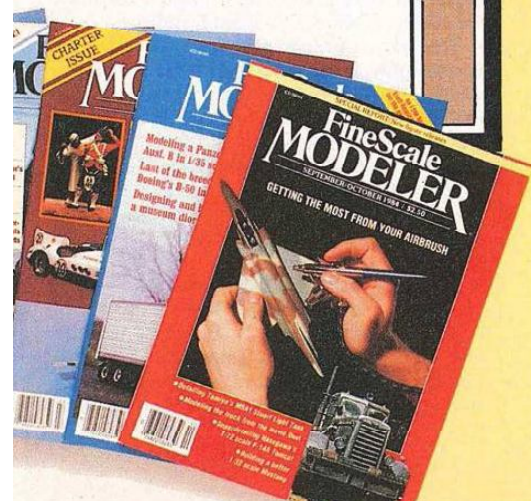
3. Winners will be selected in random drawings and decisions are final. Winners will be notified by mail and/or telephone. Any prizes returned as undeliverable will be awarded to alternate winners. Chances of winning are determined by the total number of entries received.

4. Taxes on prizes are the sole responsibility of the winners. No substitutions will be made for any prize offered. All prizes will be awarded.

5. Sweepstakes is open to residents of the United States and Canada. Employees and stockholders of Kalmbach Publishing Co., and their families, are ineligible. Sweepstakes is subject to all Federal, State, and local laws and regulations and is void whenever prohibited by law.

For a complete list of winners, send a self-addressed, stamped envelope to: FINESCALE MODELER Sweepstakes Winners, 1027 N. 7th St., Milwaukee, WI 53233.  
© 1984 Kalmbach Publishing Co.

**FineScale  
MODELER**





## COMBAT SERIES

### MILITARY HARDWARE IN BRASS

Here is an enlarged photo of our 50 cal., Machine gun, with WW-11 Cradle on M-3 Ring Mount. IT'S ALL THERE!

Applicable to 1/32, 1/35 scales

To receive our latest illustrated Catalog Sheets, send a STAMPED SELF ADDRESSED envelope to COMBAT SERIES.



•COMBAT SERIES•  
Dept. ML, P.O. Box 475, Pinedale, CA. 93650

# AIRLINE HOBBY EXTRAVAGANZA!



Our Bahamasair 737 decal is available in both 1:144 and 1:200 scales. Check our catalog for more than 200 airline schemes from American through USAir plus many exotic and colorful international carriers.

Our kit selection runs from 1:200 through 1:72 scale and includes solid, vacuumformed and injection molded kits from our own molds as well as those of the major manufacturers around the world.

More than 200 color postcards are available from our kit and decal catalog listings.

## KIT & DECAL CATALOG \$1.00

Our color slide catalog lists more than 10,000 35mm slides from the late 1930's through today which we duplicate using KODAK processing.

## COLOR SLIDE CATALOG \$3.00

BOTH CATALOGS \$3.50, ADD \$1.00 OUTSIDE NORTH AMERICA

**ATP** INCORPORATED

PHONE 10:00AM-10:00PM



3014 ABELIA COURT  
SAN JOSE, CA. 95121  
(408) 629-2121

The photos show many examples of airbrush art ranging from automotive graphics (Caiati's specialty) through model aircraft. The discussion of inks and paints suitable for airbrushing is especially interesting.

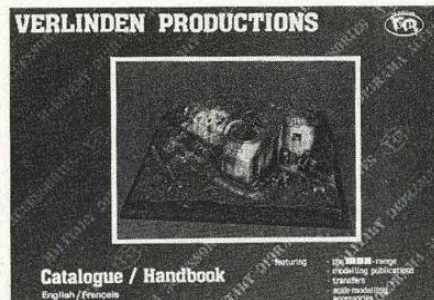
It is published by Tab Books, Inc., Blue Ridge Summit, PA 17214; the price is \$20.50.



### The Italian Airships

Giuseppe Pesce, curator of the Historical Aeronautical Museum at Vigna di Valle, is the compiler of this 8 1/4" x 11", 109-page, soft-cover book that describes the 98 airships built in Italy from 1905 through 1931 and that contains 205 black-and-white photos showing most of these craft. The captions are in both Italian and English.

The book is published by Mucci Editore s.r.l, Via Emilia Est, 1527, 41100 Modena, Italy; the price is Lit (lira) 15,000.



### Verlinden Catalog

Francois Verlinden has published a 24-page, 8 1/4" x 11 1/4", horizontal-format, soft-cover catalog describing his firm's line of 1/35 scale modeling products and books. The products include cast resin kits for World War Two bunkers and ruined buildings, dry-transfer sheets containing markings for WWII German and American military vehicles, and accessories such as WWII military road signs. There are also sheets of dry-transfer markings for Israeli military vehicles from 1948 to the present and a resin kit for a ruined Middle Eastern building.

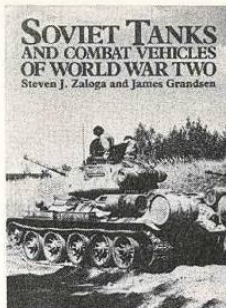
The text in French and English tells how to assemble, paint, and detail the resin kits and suggests uses for the accessories. There are 85 photos (27 in color), many of which show completed dioramas.

The catalog is available from Verlinden Productions, Berlaarsestraat, 36, B-2500, Lier, Belgium; the price is \$3.00 including surface postage, \$3.50 for airmail.

### Soviet Tanks and Combat Vehicles of World War Two

The title of this book by Steven J. Zaloga and James Grandsen is somewhat misleading, because the volume is, in fact, a study of Imperial and Soviet Russian armored vehi-



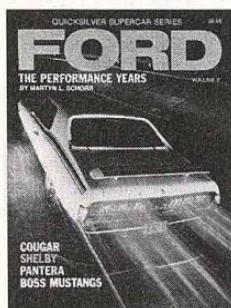


# SOVIET TANKS AND COMBAT VEHICLES OF WORLD WAR TWO

Steven J. Zaloga and James Grandsen

cles of the entire period from about 1905 through 1945. The 240-page, 7" x 10", hard-cover book contains 312 black-and-white photos (most previously unpublished), 45 1/76 scale four-view drawings of armored vehicles, and many tables. The text focuses on the technical development of Russian armor and discusses all major Soviet tanks, armored cars, and self-propelled guns, as well as such curiosities as the aerosans, which were lightly armored snow sleds driven by pusher propellers.

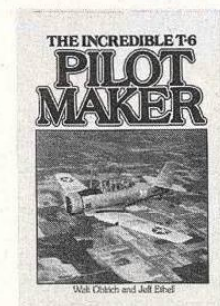
The book is distributed in the U. S. by Stackpole Books, P. O. Box 1831, Cameron and Kelker Streets, Harrisburg, PA 17105; the price is \$19.95.



## Ford: the Performance Years

Martyn L. Schorr has compiled an 82-page, 8" x 11", soft-cover album on Ford high-performance cars built from 1969 to 1973. There are 184 black-and-white photos, many tables of specifications, and numerous reproductions of Ford advertisements for such cars as the Cougar, Shelby, Pantera, and Boss Mustangs. The text describes the styling, engineering, and racing accomplishments of these cars.

It is published by Quicksilver Communications, Inc., and is distributed by Motorbooks International, P. O. Box 2, Osceola, WI 54020; the price is \$8.95.

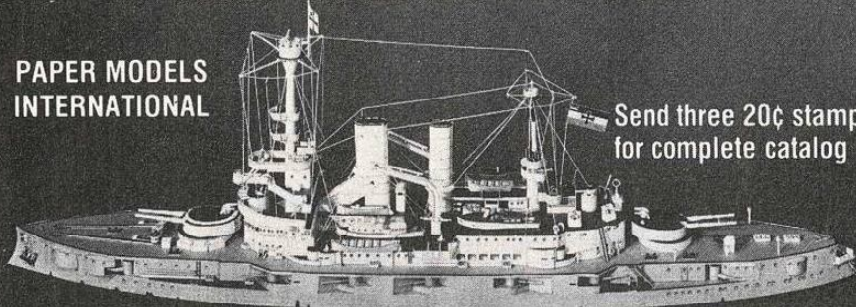


## Pilot Maker: the Incredible T-6

Well-known aviation writers Jeffrey L. Ethell and Walter E. Ohlrich, Jr., are the authors of this 144-page, 7" x 10", hard-

## PRIDE OF THE KAISER'S FLEET IN CARD!

### PAPER MODELS INTERNATIONAL



Send three 20¢ stamps  
for complete catalog

The Schleswig-Holstein, serving in both World Wars, is just one of over 40 fine scale ships of both war and peace, available in the inexpensive paper modeling field. All in 1:250 scale. From 6 to 53 inches in length. Also large selection of aircraft, historic buildings and castles.

9910 S.W. Bonnie Brae Dr. — Beaverton, Oregon 97005

## D & J HOBBY

Located in

San Francisco-San Jose area

D & J Hobby & Crafts  
96 San Tomas Aquino Road  
Campbell, CA 95008  
Ph. (408) 379-1696

COME IN AND VISIT OUR NEW LARGER STORE

WE CARRY  
COMPLETE  
LINES OF:

- ★ Imported Aircraft, Ships and Armor Kits
- ★ Fantasy Miniatures & Games
- ★ Minitanks & GHQ Micro Armor
- ★ Humbrol—Polly S—Floquil
- ★ Paasche Airbrushes & Parts
- ★ Scratchbuilding Supplies
- ★ Wargames and Miniatures
- ★ Decals, Magazines and Books

We have no  
catalog, but we  
do sell mail  
order. Send SASE  
for your specific  
inquiries.

Open: Mon-Thurs-Fri 10:30-9

Tues-Wed 10:30-6

Sat 10-5:30

Sun 12-5:30

## COMBAT MODELS



NEW

1/48 Combat Models Kits

48-084  
48-062

Flapjack  
Hind-D

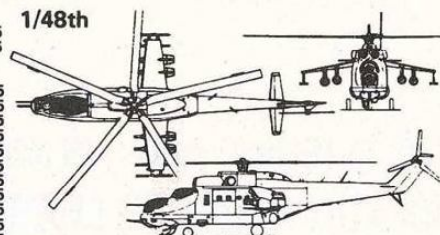
\$15.95  
15.95

REISSUED AIRMODEL KITS

72-329 Blohm & Voss BV 40  
72-296 Focke Wulf Fw 187  
72-235 Junkers Ju 288 V3  
72-158 Junkers Ju 160 A  
72-152 Douglas B-18 conv.  
72-215 Kaman H43B & Bell H-13J  
72-270 McDonnell XF-85 Goblin  
72-195 Mig-9 & Yak 15  
72-132 Sikorsky H-5  
72-190 Convair RB-57F Canberra  
72-178 North American FJ-4 Fury  
72-202 McDonnell F3H-2 Demon  
72-161 North American AJ-1 Savage  
72-175 Douglas B-66 Skywarrior  
72-299 Bestman

3.95  
5.95  
5.95  
5.95  
5.95  
6.95  
3.95  
6.95  
5.95  
12.95  
5.95  
5.95  
12.95  
8.95  
4.95

1/48th



Mil Mi-24 'Hind-D', 48-062 \$15.95

Other reissued kits

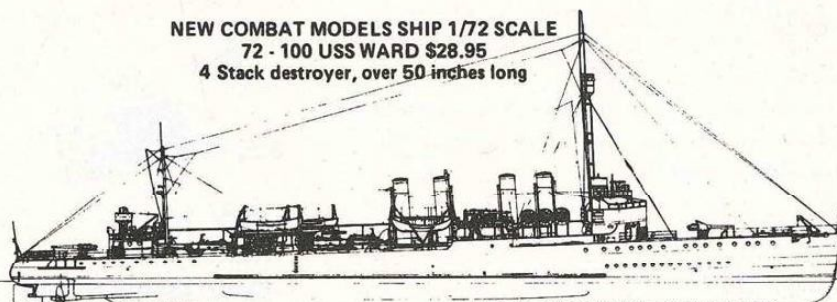
48-095 Meteor (By Planes) 14.95  
48-096 Snipe (By Planes) 9.95  
72-097 Sanders Roe Sr A/1 6.95  
48-098 Bu 133 (By Planes) 6.95

NEW SCRATCH & VAC.  
MAGAZINE \$3.75

NEW COMBAT MODELS SHIP 1/72 SCALE

72-100 USS WARD \$28.95

4 Stack destroyer, over 50 inches long



### SHIPPING INSTRUCTIONS

U. S. Orders to continental states shipped UPS.

DEALERS INQUIRIES WELCOME

RATES: Orders to \$20.00 add \$2.00, \$20.00 to \$50.00 add \$3.50, \$50.00 up add \$4.00. For a complete listing of over 100 vacuform aircraft, ships, softskin, metal accessories, figures, and complete line of our custom decals send 50 cents to:

COMBAT MODELS 1633 Marconi Road, Wall, New Jersey 07719

November/December 1984

69

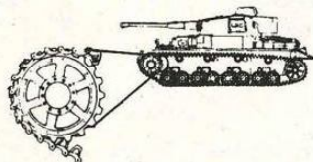


218-X1 Beech St., Bennington VT 05201  
(802) 447-0313

CONDENSED CATALOG  
**FREE**  
POSTAGE & GIFTS

Aircraft, ships, armor, small arms,  
equipment, insignia, uniforms, medals,  
units, battles, personalities — MORE!  
Individual in-depth coverage of each  
in the all-NEW Panorama Series!

When writing  
to advertisers,  
please mention  
**FineScale Modeler**  
magazine



## ARMOR IN DETAIL

*IF YOU'RE INTO ARMOR...  
.....WE'RE INTO DETAIL*

- Tamiya
- ESCI
- Italeri
- DCS-MDA
- Historex
- Deauville
- Nichimo
- Nitto
- Armor In Detail
- The Rock Quarry
- Micro System
- & Much, Much More

1238 Poppyseed Drive  
New Brighton, MN. 55112

Send 2.50  
For Current  
1984 Catalog

## THE INTERNATIONAL PLASTIC MODELERS SOCIETY

**DO YOU WANT TO LEARN  
MORE ABOUT MODELING?**

**IPMS/USA OFFERS YOU...**



Membership in a non-profit organization founded "BY  
MODELERS FOR MODELERS".

Membership includes 4 Quarterlies and 6 Updates per  
membership year. They contain articles on camouflage and  
marking, super-detailing, model conversions, scratch building,  
historical information, and much more.

Yes! Enroll me now in IPMS/USA.

I enclose \$ \_\_\_\_\_ for 1-year membership in IPMS/USA. I  
understand this membership includes subscription to four IPMS/USA  
Quarterlies and six Updates.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Country \_\_\_\_\_

Type of Membership:

☐ Adult \$18.00 ☐ Foreign \$21.00 ☐ Junior \$10.00 Birthdate \_\_\_\_\_  
(17 years and under)

For Samples, send \$2.75.

Make check or money order payable to IPMS/USA

Please don't send cash!!

83044

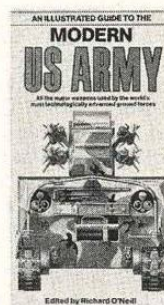


Mail to:  
**IPMS/USA**  
New Membership  
P. O. Box 480, FSM  
Denver, Colorado  
80201

cover book on the North American AT-6  
(SNJ, Harvard), the famous World War Two  
advanced trainer. The 215 black-and-white  
photos show almost every version of the  
aircraft.

The text and photo captions discuss the  
plane's use as a trainer by the armed forces  
of many nations during WWII, its deploy-  
ment as a target-marking aircraft in Korea,  
and its varied civilian uses that have in-  
cluded crop dusting and sky writing.

The book is published in the U. S. by Spe-  
cialty Press, P. O. Box 426, Osceola, WI  
54020; the price is \$17.95.

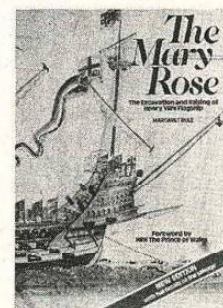


### An Illustrated Guide to the Modern U. S. Army

A recent addition to Arco's Illustrated  
Guide series, this 160-page, 4½" x 8½", hard-  
cover book edited by Richard O'Neill con-  
tains 147 photos (nearly all in color) of  
weapons and other equipment currently  
used by the U. S. Army. There are specifica-  
tions and descriptions of items ranging from  
the M1911A1 .45-caliber pistol through the  
Ground-Emplaced Mine-Scattering System  
(GEMSS), a mine dispenser that can hold  
800 4-pound mines.

There are brief discussions of the Army's  
current doctrine, which relies heavily on a  
presumed technological superiority over po-  
tential enemies.

The book is published in the U. S. and  
Canada by Arco Publishing, Inc., 215 Park  
Avenue South, New York, NY 10003; the  
price is \$9.95.



### The Mary Rose

Built in 1509 and named after Henry  
VIII's favorite sister, the *Mary Rose* was a  
700-ton, 91-gun carrack that capsized and  
sank in The Solent near Portsmouth, Eng-  
land, on July 19, 1545.

The ship lay undisturbed until 1836 when  
several cannons were recovered by divers,  
but no other exploration took place until the  
wreck was rediscovered in 1971 by a team of  
marine archaeologists that included Marga-  
ret Rule, the author of this 8" x 10½", 240-  
page, hard-cover book with 158 photos (106  
in color), and 53 drawings and paintings.



Rule tells how professional and amateur divers (including Prince Charles) first inspected the wreck, then removed artifacts, and finally raised the entire ship, which is now in No. 3 dock at the Royal Navy Base in Portsmouth. Studies of the ship and objects found with it have expanded our knowledge of sixteenth-century shipbuilding methods, military practices, and even sailors' diet and hygiene.

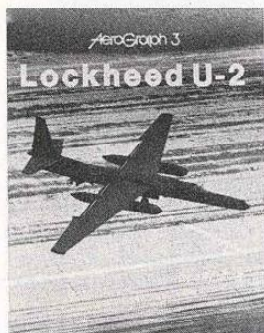
The book is published in the U. S. by Naval Institute Press, Annapolis, MD 21402; the price is \$18.95.



#### Sky Truck

Stephen Piercey's hobby is flying in and photographing piston-engine transport aircraft, particularly those that are still operating in the Caribbean or South America. This 128-page, 8 1/4" x 9", soft-cover book contains 120 excellent color photos taken from about 1976 through 1983 of such aircraft as the DC-3, DC-4, DC-6, DC-7, Lockheed 749, and even a civilian-operated B-17 (used to transport fresh meat in Bolivia). The text is limited to captions for each photo.

Published by Osprey Publishing Limited, the book is distributed in the U. S. by Motorbooks International; the price is \$11.95.



#### Lockheed U-2

Lockheed U-2 high-altitude reconnaissance aircraft were first manufactured in the mid-1950s and continue in service with the USAF and NASA. Jay Miller's 124-page, 8 1/2" x 11", soft-cover book contains 316 black-and-white photos, has 24 drawings of U-2 variants, and discusses every aspect of U-2 history. There are even sections on partial- and full-pressure suits and high-altitude cameras.

The author draws a number of interesting conclusions based on interviews with U-2 pilots. For example, he estimates that the plane's average maximum altitude is 75,100 feet and may exceed 81,000 feet under ideal conditions.

The book is published by Aerofax, Incorporated, P. O. Box 5337, Austin, TX 78763; the price is \$18.95.

FSM

TAMIYA • MATCHBOX • TESTORS • HASEGAWA • OTAKI • MICRO-SCALE • MPC

• LS • ITALERI • ESCI • KP •

**WAR AND PIECES**

7 SOUTH MAIN ST.  
WEST HARTFORD, CT 06107

"FINE SCALE MODELS FOR FINE SCALE MODELER"

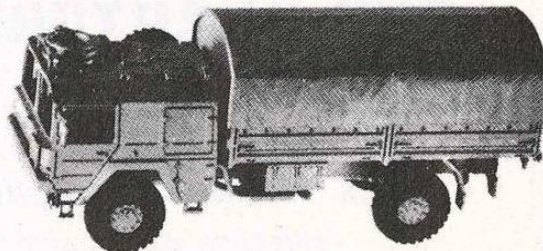
• ASK FOR DETAILS ON "HUNDRED CLUB"

• CALL FOR HARD TO FIND ITEMS. No Catalog

203-232-0608

MasterCard • VISA • American Express

• REVELL • TAKSUDA • MONOGRAM • FUJIMI • AIRFIX • WILLIAMS BROS. •



## A. Kempees

"The Unofficial Importer"  
All 1:87 Perfect HO scale

ROCO Minitanks are an extensive assortment of HO scale military miniatures suitable for use in dioramas.

They are molded in polystyrene plastic and feature many of the details of the much larger scales.

Choose from a selection of  
over 200 military vehicles!

## A. Kempees

SEND \$4.00 FOR  
NEW 40 PAGE  
COLOR CATALOG

A. Kempees  
Hensyn Village Q-4A  
Budd Lake, NJ 07828

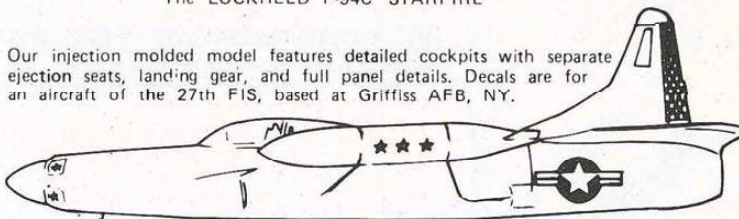
## A. Kempees

### LIMITED EDITION LIMITED EDITION

THUNDERBIRD MODELS is pleased to announce our first 1/72 scale model:

The LOCKHEED F-94C 'STARFIRE'

Our injection molded model features detailed cockpits with separate ejection seats, landing gear, and full panel details. Decals are for an aircraft of the 27th FIS, based at Griffiss AFB, NY.



PRICE: \$6 plus postage (\$0.80 U.P.S. or \$2 Air Mail USA Only  
\$2 surface or \$4 Air Mail overseas) DIRECT TO:



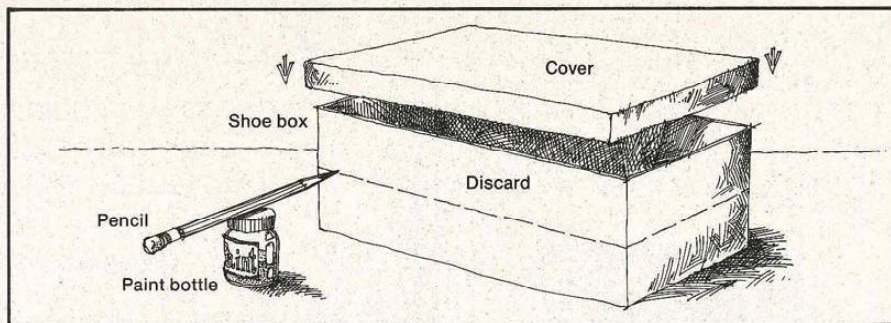
**THUNDERBIRD  
MODELS**

Route 13, Box 257B Fort Worth, Texas 76119 USA

F-89 D/H/J Available in September. \$7.50 plus 80¢ P&H



Would you like to share information on a useful tool or technique with other FSM readers? Send a brief description of the tool or technique and a black-and-white photo or a pencil sketch to FSM Tips, FINESCALE MODELER, 1027 North Seventh Street, Milwaukee, WI 53233. Please enclose a stamped, self-addressed envelope for return of photos. Tips are paid for upon publication.



## THE QUARTERMASTER



P.O. DRAWER Y ★ Dept. F  
ST. JOSEPH, ILLINOIS 61873

KITS, FIGURES, GAMES, AND SUPPLIES

OVER 50 MANUFACTURERS

Aero Pubs  
Avalon Hill  
Barton  
Deauville  
G.H.Q.  
G.D.W.  
Historex

Humbrol  
Italaerei  
Minicraft  
Micro Scale  
New Hope Design

Osprey  
Phoenix  
Ral Partha  
Superior  
Tamiya  
T.S.R.  
X-Acto

ALL BELOW RETAIL PRICE

MAIL-ORDER CATALOG \$3.00

**Paint storage.** I take an ordinary shoe box and, using a paint bottle as a guide, draw a line around the bottom with a pencil. I cut off the upper part and place my paints inside the box and use the original cover. I can stack nearly twice as many of these shortened boxes in the same space as standard boxes.

*Dick Sirola*



**Snowbound dioramas.** Tired of making a mess of your snow scenes with cornstarch, sugar, or flour? Try mixing equal portions of white glue and a water-soluble white paint and applying it to your base. Wait till it dries to a semi-tacky state, and scatter Wilhold Colorless Glitter on top. As the paint/glue combination dries, a sparkling surface appears. Glitter is available in art supply stores.

For a drifted, blown-snow effect, place the "wintered" diorama base in a microwave oven for 15 to 30 seconds on full power. The results are a rippling, wavy surface that looks like drifted snow. Make sure you don't have any plastic models attached to the base when you do this, or they will take on a rippling, wavy appearance too!

*David V. Chevalier*

**Frosted window panes.** I use Krylon Workable Fixative (No. 1306) flat clear acrylic sprayed on clear sheet plastic to simulate frosted windows in winter-scene buildings. Krylon paints are available at art supply stores.

*P. F. Eng*

**Tape handling.** Do you find picking up small pieces of masking tape from the cutting surface tedious and annoying? Get a better grip on the problem this way: Butt two pieces of glass together and place a

## METALIZER

THE ULTIMATE IN MODEL METALIZING FINISHES

### NEW IMPROVED FORMULA

A unique product for unique models. From the people who invented the world's first plastic model metalizing finish. No other metalizing finish offers you the versatility of Metalizer. For all types of aircraft, car, ship, train, armour and science fiction models. Airbrush on and buff to a brilliant sheen in minutes. Metalizer is a tough and durable waterproof finish. With 13 metal shades, sealer and 2 dayglo colors to choose from.

1. ALUMINUM
2. STEEL
3. MAGNESIUM
4. TITANIUM
5. GUN METAL
6. EXHAUST
7. SEALER
10. DAYGLO-RED
11. DAYGLO-ORANGE
12. DARK ANODONIC GREY
13. METALLIC BLUE
14. GOLD
15. BURNIT METAL
16. \*COPPER
17. \*BRASS
18. \*ALUMINUM-NON BUFFING
19. \*THINNER
101. \*ALUMINUM PLATE
- IN AEROSOL CANS
- \*NEW FOR 1983

### METALIZER PRODUCTS

1019 BONITA ST.  
TUSTIN, CA 92680

SEND STAMPED & SELF-ADDRESSED  
ENVELOPE FOR METALIZER BROCHURE

Dealer Inquiries Invited





## FROG KITS FOR SALE

F201 Heinkel 111H.....	\$8.00
F202 Me 100G.....	6.00
F203 Canberra B(1)8.....	5.00
F204 Hunter FGA9.....	5.00
F205 Dornier Do 17Z.....	6.00
F206 Gladiator II.....	5.00
F208 Boston/Havoc.....	7.00
F209 Typhoon.....	6.00
F210 Thunderbolt.....	6.00
F211 FW 190A/3.....	5.00
F212 Tempest V.....	7.00
F216 Fiat G55.....	6.00
F217 Vampire.....	7.00
F218 Kittyhawk.....	6.00
F219 Zero.....	8.00
F220 Spitfire 1A/5A.....	9.00
F222 Dewoitine D 520C.....	9.00
F224 Morane 406.....	7.00
F225 MC 202 Folgore.....	7.00
F228 Gannet.....	6.00
F231 Typhoon 1B.....	6.00
F232 Thunderbolt.....	6.00
F233 Spitfire 8/9.....	10.00
F235 Do 335.....	6.00
F236 FW Ta 152H.....	6.00
F238 Buccaneer.....	6.00
F239 DH Hornet.....	6.00
F241 Maryland.....	9.00
F242 Wildcat.....	5.00
F243 Corsair.....	6.00
F244 Avenger.....	6.00
F245 Hellcat.....	6.00
F248 Me 262.....	6.00
F256 Lynx.....	5.00
F257 Firefly.....	6.00
F258 Swordfish.....	6.00
F260 A-7A Corsair.....	6.00
F261 F-5A.....	7.00

### "NEW"

## Straight from the bottle COMPUCOLOR LIMITED 2 Airbrush Colours. \$1 per bottle

CSG 21 Black (Matt)
CG 2 RLM 02 Grau
CG 11 RLM 65 Heilblau
CG 12 RLM 66 Schwarzgrün
CG 13 RLM 70 Schwarzgrün
CG 14 RLM 71 Dunkelgrün
CG 18 RLM Mittelgrün
CG 33 RLM Hellgrün
CAC 1 FS 36440 Light Gull Gray
CAC 2 FS 34079 Forest Green
CAC 3 FS 36320 Dark Compass Gray
CAC 4 FS 36375 Light Compass Gray
CAC 5 FS 34102 Green O.D.
CAC 6 FS 30219 Tan
CAC 7 FS 36622 Gray
CAC 12 FS 37875 White
CAC 14 FS 36081 Dark Gray
CAC 15 FS 36473 Aircraft Gray/COIN Gray ADC Gray
CAC 16 FS 36118 Gunship Gray
CAC 26 FS 15050 Blue Angels Blue
CAC 32 FS 34092 Green
CA 2 ANA 613 Olive Drab (faded)
CA 8 ANA 621 Dark Gull Gray
CA 11 ANA 607 Non Specular Sea Blue
CA 13 ANA 623 Gloss Sea Blue
CA 14 ANA 608 Intermediate Blue
CA 16 Neutral Gray 43
CA 21 Zinc Chromate Yellow
CA 26 Light Gray
CB 3 Dark Earth
CB 5 Ocean Gray
CB 6 Medium Sea Gray
CB 7 Dark Sea Gray
CB 13 Sky
CB 17 Azure Blue
CB 20 PRU Blue
CB 22 Middle Stone
CB 23 Cockpit Green
CBC 1 Light Aircraft Gray
CBC 2 Hemp
CBC 4 Dark Green
CBC 5 Barley Green
CBC 6 Medium Sea Gray
CBC 7 Dark Sea Gray
CBC 8 Extra dark Sea Gray
CBC 15 Olive Green (RN)
CBC 18 RAF Blue Gray

### NEW OR RE-ISSUED KITS

Italeri AC 130 Gunship.....	\$14.00
BR 20.....	5.00
ESCI 1/72 Sea Harrier.....	5.00
1/72 F-16 Cockpit.....	12.00
AIRFIX 1/72 Vulcan.....	12.00
1/72 Hunter FGA 9.....	3.00
1/72 Firefly.....	3.00
1/72 U-2.....	5.00
1/72 Blohm & Voess Bv 141.....	4.00
1/72 Roland C II.....	2.00
1/72 Kamov K 25.....	4.00
1/72 Mil 24.....	5.00

**OLD/DISCONTINUED KITS** If you are looking for an old/discontinued kit, you can do no better than contact the Specialist—we hold good stocks of discontinued lines and unusual kits brought in from the many collections we buy. Just give us a call and ask for Mr. Molton on 01-681 2428. (London).

Postage & Packing orders.....	Airmail
Order \$10.00.....	\$4.00
Order \$20.00.....	\$6.00
Order \$50.00.....	\$10.00

RIC Large S.A.E. for List

### MIL SLIDES

106 Selsdon Road  
South Croydon, Surrey CR2 6PF, England.  
Telephone order with charge cards  
welcome.  
London 01-681-2428

## Discover the world's oldest hobby! Build this beautiful wooden ship model.

*Special offer for  
Those who have  
never built a  
ship before!*

Wouldn't you love to build this historic ship model? It's a true-to-scale, 21" replica of the 2-masted schooner *Swift*, a Virginia pilot boat of 1805. Well, now you can! And you don't have to be a skilled craftsman to do so.

### It really isn't hard

Even if you've never built a model before, you can experience the relaxing pleasure and pride of accomplishment that is offered by this fascinating hobby. You can build the *Swift*. The secret's in our kit, designed especially for the first time modeler, with pre-cut parts that make assembly easy. Clear, large scale plans and instructions that virtually take you by the hand and guide you every step of the way through hours of the most relaxing fun you'll ever have. And when completed—a museum quality model you'll display with pride, with gleaming brass fittings, walnut planked hull, delicate rigging—lifelike in every detail.

### Quality you can see and feel

The materials in our kit may be better than those used in the original *Swift*. The keel section and frames are pre-cut plywood, ready for quick assembly. The *Swift's* hull is planked twice; once with thick, flexible limewood for strength, then overlaid with planks of African walnut for lasting beauty.

You won't have to make the fittings—we've done that for you. Our kit contains ready-to-use blocks and deadeyes of rare, yellow boxwood. We include eyelets, bracers and belaying pins—over 70 parts of solid brass! Even the cabin door hinges are brass, as are the 250 miniature nails you'll use to fasten the planking to the hull and deck. And, since the



original wooden *Swift* had no plastic parts, our kit doesn't either—*anywhere!*

Creative? And how! Overwhelming? Not a bit! But be prepared for hours of the most challenging, engrossing, relaxing fun you've ever had.



**An "everything you'll need" special offer, with free tools and handbook.**

We want to introduce you to this great hobby, now! So we've made it easy for you to get started.

Our special offer includes the *Swift* kit plus all the tools you'll need to build her: pliers, hammer, knife, file, tweezers, sandpaper, glue, wood oil, and more. You'll also receive a free copy of "Ship Models from Kits," a 110 page beginner's guide. You don't have to buy anything else. The tools normally cost \$17; the book retails for \$7.95. But they're yours, FREE when you buy the *Swift* kit at its regular price of \$49.95 (plus \$5.00 insured delivery).

### Credit card holders can order toll-free

Call 800-228-2028, ext. 68, 24 hours a day. In Nebraska, call 800-642-8300. Or use coupon below to send check or money order. If less than delighted, you may return your purchase within 30 days for a full refund.

### Miniature Cannon Kit Bonus!

Set of two solid brass cannon on walnut carriages to be mounted amidship. \$4.00 value, sent FREE with your order.

**model expo, inc.**

23 Just Road  
Fairfield, N.J. 07007

### MODEL EXPO, INC.

23 Just Road, Fairfield, N.J. 07007

Please send me \_\_\_\_\_ kits of the *Swift* @ \$49.95 plus FREE tools, book and cannons. Check or money order enclosed. (Add \$5.00 for insured delivery. NJ residents must add 6% sales tax.)

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

72 page, full-color ship model catalog sent FREE with your order.

Model Expo, Inc. 1984



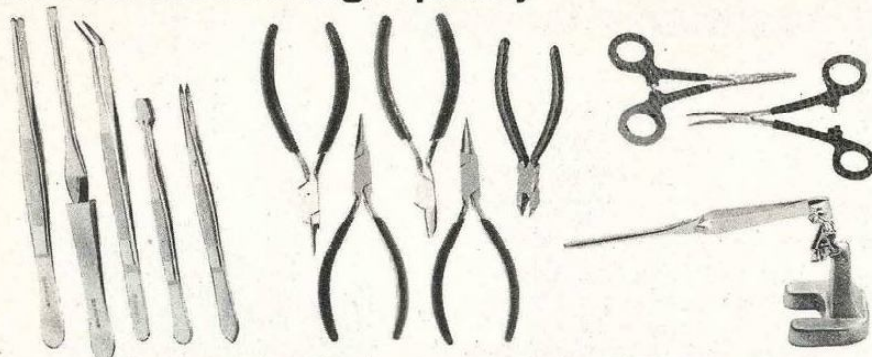
For building, wiring, and detailing  
requiring an extra steady hand

# PLIERS, GRIPPING TOOLS

a complete selection  
and consistent high quality



Write for our  
new catalog  
today!  
Only \$1.00.



## You can't do better than Mascot!

You'll really like the professional results these tools give. Look at the multi-purpose tweezers used for sorting, gripping, and assembling small pieces . . . or the fine pointed pliers like the long, needle nose type used for precise bending of hand rails and guard rails . . . or the versatile, but often hard-to-find hemostats which serve as pliers, tweezers, clamps, or heat sink as the situation demands. Not one of these tools is a toy. That's what makes Mascot special. Ask your model supplies retailer about these and other tools from the Mascot line.

SEND FOR OUR NEW 24-PAGE U84 CATALOG TODAY. PLEASE ENCLOSE \$1.00  
TO COVER SHIPPING AND HANDLING. FEATURES OVER 160 ITEMS.

# MASCOT™

P.O. BOX 243F • CARLSTADT, N.J. 07072

# 1001 UNIQUE WOOD SHAPES

## IN PRECISION SCALE BASSWOODS

Today, basswoods are preferred over balsa more and more by the serious hobbyist, prototype model maker, dioramist, architect, etc., because of structural strength, ability to hold detail, ease of working and longevity. From structural shapes, doll house mouldings, carving blocks, decking, strips and sheets to hardware and complete model railroad kits, Northeastern offers a complete line of quality, precision scale products. Satisfaction guaranteed or your money back.

For fastest action—mail this coupon today!  
OK Northeastern—rush me your catalog and prices today.

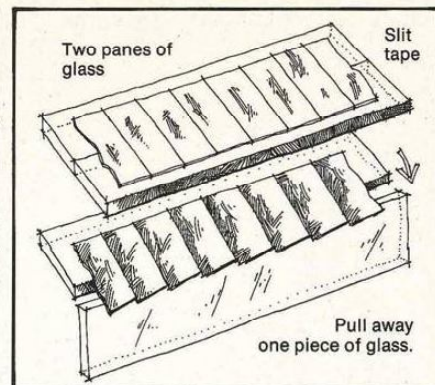
Name \_\_\_\_\_  
Firm \_\_\_\_\_  
Field of interest \_\_\_\_\_  
Street \_\_\_\_\_ City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_

SEE YOUR  
LOCAL DEALER  
OR WRITE  
FOR OUR  
CATALOG  
AND  
PRICES  
TODAY!



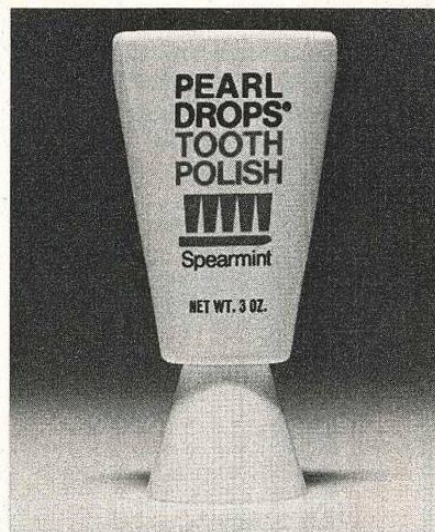
**NORTHEASTERN**  
SCALE MODELS INC.

P. O. Box 425FSM  
Methuen, MA 01844  
(617) 688-6019



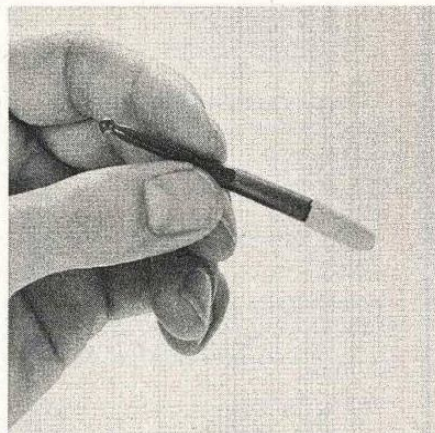
length of tape over the seam. Slit the tape into small pieces, cutting across the seam. Then, peel away one piece of glass, exposing one edge of the tape for easy handling.

*Ed Kolbush*



**Glue applicator.** Pearl Drops tooth polish bottles are ideal dispensers for white glue. They're small, easy to handle, and the caps allow them to be placed upside down, so there's no waiting for the glue to run down.

*Bob Raw*



**Decal blotter.** A sponge-tip makeup applicator from the cosmetic counter of your favorite department store is perfect for blotting water and setting solution from decals. It has a short plastic handle with a round, fine-textured sponge on the end. Unlike pa-

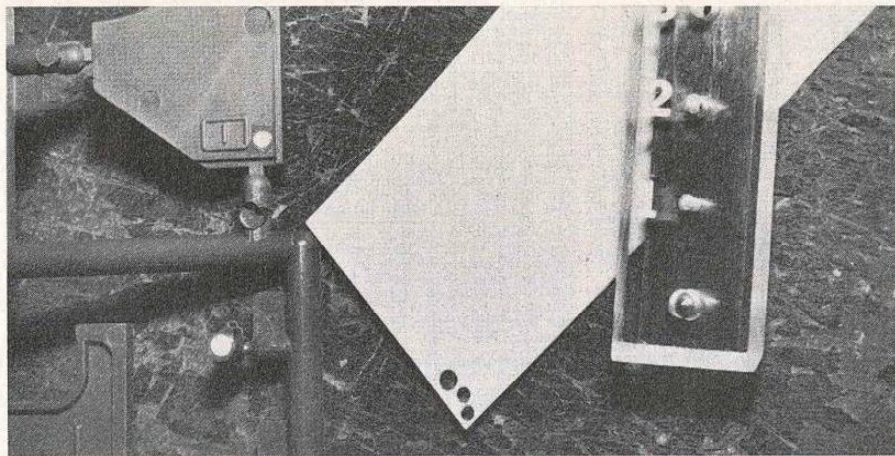


per towels, the makeup sponge will soak up many times its weight just by pressing straight down on the decal. Decals won't stick to the sponge, and by pressing vertically, distortion and cracking are avoided. They are especially helpful when decaling corrugated or concave surfaces.

T. E. Bell

**Filling mold marks.** Ejector pin mold marks are difficult to fill, but here's an easy way if you have Waldron's Punch set. I use it to cut out small circles of thin sheet styrene. I then glue the discs into the ejector pin marks and after they're dry, I sand them flush. Another way is to cut wafers from the proper size sprue (or stretched sprue for smaller-sized circles).

Alan M. Ernst  
FSM



## CLASSIFIED ADVERTISEMENTS

### PLEASE FURNISH STREET ADDRESS FOR FSM'S PRIVATE RECORDS WHEN USING A P.O. BOX NUMBER IN YOUR AD

This section is open to anyone who wants to sell or buy scale modeling merchandise.

**RATE:** 22¢ per word. MINIMUM charge is \$2.64. Count ALL initials, single numbers, groups of numbers (i.e., AFV or B-24), name, address number, street number, city, state, phone numbers each as one word. Zip code is free. Payment should be made in advance.

**CLOSING DATE:** Jan/Feb issue closes October 15, Mar/Apr issue closes December 15, May/June issue closes February 15, Jul/Aug issue closes April 15, Sep/Oct issue closes

#### FOR SALE

**Brookhurst Hobbies,** 12741 Brookhurst Way, Garden Grove, CA 92641, has military kits from around the world: Plastic armor, aircraft, wargames, books, paints, tools. Mail orders sent anywhere. Catalog, \$2.50.

**Recon Hobbies:** Big discounts on armor, aircraft, ships, cars, games, hobby supplies, plus collectors' corner. Send \$1 for catalog to P.O. Box 123, Manhasset, NY 11030-0123.

**We have the latest plastic, military, and automobile kit releases in stock.** Mail order is a specialty with us. Also books, decals, paint, magazines, and more. Write or call. Ted's Engine House, 6307 Westfield, Pennsauken, NJ 08110. (609) 662-0222.

**Lead soldier molds,** scarce Civil War, WWI, WWII cannons, Napoleonic, fantasy. An easy and fun hobby. Illustrated brochure \$1 (refundable). Dunkin, Box 717FS, Calvert, TX 77837.

**Revell 1/96 Apollo Saturn kits,** \$25 postpaid. Curt Hughes, 429 Pinto Dr., N. Huntingdon, PA 15642. (412) 863-7106.

**Photos:** Alaska bush planes, Widgeon, Otter, Beaver, C-119, Skyvan, Helio Courier, helicopters, etc. Send \$5 for 8" x 10" Goose photo and catalog to Bush Planes, P.O. Box 9342, Seattle, WA 98109.

**Lead soldier molds,** castings, military, civilian, 25 mm-54 mm. Catalog, \$1. Toymaker of Charleston, P.O. Box 1406, Charleston, SC 29402.

**Quality tools and materials.** Brass, aluminum, hardwoods, and fasteners for the modeler. Describe your needs for quote, or ask for fliers. SSAE to Monty Stephenson, BRC, Box 22968, Rochester, NY 14692.

**Big 37-page catalog.** Lists hundreds of 1:64 scale items including styrene, wood, vehicles, figures, trains, decals, backdrops, structures, and more. \$2.75 in U.S., \$4.25 elsewhere. Ask for our 1:48 list. Scenery Unlimited, 310 Lathrop, River Forest, IL 60305.

**Airliners of the world.** Top quality 35 mm full color collectible slides of aircraft from over 100 countries. For 32-page illustrated catalog, supplement list, and two sample slides, send \$2 to Airline Photos, Box 650034, Miami, FL 33165.

**Discount prices on plastic models, paint, cement, brushes, books, tools, rollers, games, railroads, and more.** Send long SSAE for free catalog (two 20¢ stamps). Phone orders, MasterCard, and Visa accepted. Windcraft Hobbies, 389 Windsor Ave., Windsor, CT 06095. Phone (203) 728-6664.

**The Wizard's tree.** A handcrafted tree that looks like a tree from a sword and sorcery type scene. Excellent for displaying with fantasy figures. \$12.95 postpaid or \$1 and SSAE for instructions on building it. Matt McCarthy, 10 Prairie Ave., Suffern, NY 10901.

**Space ships and robots:** One of the largest selections of excellent quality kits. Latest re-

June 15, and Nov/Dec issue closes August 15. We do not furnish box numbers.

**ALL COPY:** is set in standard 6-point type. First several words only set in bold face. If possible ads should be sent typewritten to insure accuracy.

**READERS' NOTE:** When advertiser says SSAE or SASE he requires stamped, self-addressed envelope with your inquiry. LSSAE is large envelope.

Send your ads to FineScale Modeler, 1027 N. 7th St., Milwaukee, WI 53233.

leases at affordable prices. New fall catalog, \$2. B&S Enterprises, 217-A E. Camp Wisdom, Suite 123, Duncanville, TX 75116.

**Master model maker:** Museum quality models. Military and fantasy models expertly built and painted. Write or call. Alex Castro, 32-03 68th St., Woodside, NY 11377. (212) 457-1479.

**Discount book dealer:** Save on aviation and military subjects. Hard- and soft-cover titles from Germany, Italy, France, Finland, England, and the U.S. All current releases. 60¢ stamps for 33-page list. Military Books Germania, 4509 Xerxes Ave., S., Minneapolis, MN 55410.

**Back issue periodicals:** Aeroplane Monthly, Air-Craphics, Airpower, Wings, Scale Models, many others. Send want list and SSAE. Periodical Exchange Germania, Box 121-A, Hopkins, MN 55343.

**Military miniature bases,** highest quality hardwood. Over 300 different combinations of wood, styles, and sizes available. Sampler package of six bases and listing, \$10 postpaid. The Base Camp, 33 Sheridan Ave., Metuchen, NJ 08840.

**Glass domes,** protect those special military miniatures. Mahogany base, ready for staining or varnishing, classic styling. Series "77" size (4" x 7") \$7 each, two for \$13, postpaid. 54 mm size (3" x 4") \$6 each, two for \$11 postpaid. The Base Camp, 33 Sheridan Ave., Metuchen, NJ 08840.

**Diorama cube.** 4" x 4" plastic cube. An inexpensive way to protect miniature groupings. Ideal for 54 mm or 30 mm figures. Hardwood maple base included. Ready to stain or varnish \$6 each, two for \$11 postpaid. The Base Camp, 33 Sheridan Ave., Metuchen, NJ 08840.

**The Base Camp,** the place for high quality hardwood military miniature bases. Doing business for over 15 years. Thousands made. We serve the masters. Sample and listing \$2. Send to 33 Sheridan Ave., Metuchen, NJ 08840.

**Attention collectors and baseball fans!** Introducing injection-molded baseball figures available in six poses: Batter, catcher, first baseman, and three types of pitchers. Available fully painted or bare. For information, send SSAE to Something Different, P.O. Box 197, Bayside, NY 11361.

**Dremel moto-tool,** universal stand. Excellent. \$18.50. Moran, Box 1231, Rockypoint, NY 11778.

**Thermoformed display or flying models,** 1954 vintage kits. Skyray, Demon, Super Sabre. \$5 per kit. All three for \$12, include \$3 for postage and packing. Hobby Hideaway, Delavan, IL 61734.

**Solid model kits:** 1954 vintage. F-86, Meteor, F-89, Venom, XB-51, XB-47. \$3 each or \$15 for all six. Add \$3 for postage and handling. Hobby Hideaway, Delavan, IL 61734.

**Scale documentation:** One of the world's largest full-color collections of aircraft foto-

Paaks and Koku-Fan 3-views. Catalog \$2 and SSAE to Scale Model Research, 418 E. Oceanfront, Newport Beach, CA 92661. Satisfaction guaranteed.

**Huge discounts off aircraft, armor, ship kits, and Micro-Scale decal sheets.** \$1 and LSSAE for 600-item list. Peter Garding, 501 5th Ave., S.E., St. Cloud, MN 56301.

**Military miniatures.** Painted 30 mm boxed sets, U.S. Civil War infantry, cavalry, artillery, WWII U.S. and German. SSAE for list. Modeltoys, Box 3032, Warrenton, VA 22186.

**Paper toys, paper models.** Rare antique and modern models and toys of paper from around the world. Ships, planes, buildings, dolls, soldiers. Catalog \$3. The Paper Soldier, 8-C McIntosh Lane, Clifton Park, NY 12065.

**Aurora 2001 Moonbus kits.** Have two, both complete and in mint condition. Highest bid by November 15, 1984 takes one or both. William Keel, 3211 Chapel Creek, #207, Dallas, TX 75220.

**1985 catalog,** 200 pages. Thousands of chemicals, glassware, science/hobby equipment. \$2. Merrell Scientific, 1665 Buffalo Rd., Rochester, NY 14624.

**Reference books for ship modelers and maritime enthusiasts.** 1984 catalog of U.S. and imported titles, \$1 (refundable). D. M. Stryker, Bookseller, Box 1546-B, Rockville, MD 20850.

**Will exchange literature and kits.** Also photos of tanks from WWII to the present. Josef Spurny, Mozartova 9/432, 15000 Prague 5, Smichov, Czechoslovakia.

**Old kits.** Accepting bids on Aurora Atlantis, ITC Oregon, ITC sub chaser, and Faller HO bridge over River Kwai. Unbuilt and nice. Penn Station Model Shop, 3435 W. Lake Rd., Erie, PA 16505.

**1st Armored Model Supply,** P.O. Box 1706, New Rochelle, NY 10802. Imports and domestic models. Bandai 1/48 scale Kubelwagen \$3.50, Wespe 105 mm SP \$6, Hetzer 38ETD \$6, PzKpfw IVD \$7, King Tiger (Porsche) \$8, Panther Ausf G \$8, Elefant TD \$8, Tiger 1E \$8, Tamiya 1/35 scale M134D Can Armato \$8, M-133 APC \$10, T34/76B \$10, T34/76C-D \$11, SU-85 TD \$10, KU-11 assault gun \$12, M1 Abrams \$13.98, Israeli Merkava \$16.98. This is a sample of the many items we have available. In addition to models, we carry many lines of scratchbuilding supplies, paints, decals, conversion kits, and other accessories. Our 1984 catalog costs \$3. We offer a 10% discount to members of IPMS, MAFA, and AFU associations when you enclose your ID number with your order. Ordering information: Minimum order \$10. Postage: \$10 to \$20 order, \$20 to \$30 order, \$2.50; over \$30 order, \$3. All prices in this ad are in effect until October 31, 1984. Please mention this ad when ordering.

**Japanese science fiction kits at low, affordable prices.** Latest popular robot, monster, spaceship kits, all in our catalog. \$2 for latest issue, refunded with first order. Compare and save money at Starline, Box 322-SP, Stanton, CA 90680. Visa/MasterCard.

**Discover the exciting world of paper models.** Featuring realistic, full-color scale replicas of aircraft, ships, cars, famous buildings, birds, and more. Easy to build. Get started today. Illustrated catalog, \$1. Starline, Box 322, Stanton, CA 90680. Over 300 items!

**Kit Collectors International** is the club for model kit collectors, with our bimonthly photo-illustrated journal "Vintage Plastic" featuring articles and news for kit collectors and loads of reader ads. Over 600 members worldwide. Many benefits for members. SSAE gets full information. \$1.75 for sample "VP" issue. Membership \$12 per year U.S. and Canada; \$18 per year worldwide. Kit Collectors International, Box 38, Stanton, CA 90680.

**Airliner model kits, decals, related items.** Large selection from all over the world. Low prices, compare and see! Mail order worldwide. \$1 for latest catalog. Visa/MasterCard.

Starline Hobbies, Box 38, Stanton, CA 90680.

**Gate 66,** the airline modeler's newsletter, published bimonthly since 1974, covers all aspects of airliner modeling. Well-illustrated, model kit news and reviews, how-to's, reader photos, and ads. Subscribe to the original Gate 66, \$9.50 per year in North America, \$18 per year worldwide. Checks payable to Starline. Mail to: Gate 66, Box 660, Stanton, CA 90680. Sample copy, \$1.75.

**Discount Hobby Center,** 405 James St., Utica, NY 13501. Phone (315) 733-3741. Imported and domestic plastic models. Hasegawa 1/48 scale F-16A \$8.95, F-16 Thunderbird \$8.95, F-4J, F-4B/N, F-4C/D, F-4EJ, F-4E, F-4G Phantoms \$14.50 each. Hasegawa 1/72 scale Jaguar GR Mk.1A \$5.25, Sea Harrier Mk.1 \$4.12, F-20 Tiger Shark \$4.12, Harrier GR-3 \$4.12, Jaguar E/T Mk.2 \$6.25, AH-64 Apache \$5.25, aircraft weapons sets nos. 1, 2, 3, 4, \$3.37 each, aircraft weapons loading set \$3.37, 1/48 weapons sets nos. 1, 2, 3, \$3.95 each. Fujimi 1/72 scale F-16A late production \$5.59, Bae Hawk RAF \$3.59, Bae Hawk Finnish \$3.59, Bae Hawk Red Arrows \$3.95, AV-8A Harrier \$3.95, Harrier GR-3 \$3.95, Sea Harrier sale \$2.99, Ki-36 Ida Army \$3.59, Ki-55 Ida Type 99 trainer \$2.79, B6N1 Jill \$4.95, B6N2 Jill \$4.95, B6N2 Jill Tenzan reinforcement \$5.59, Judy D4Y2 and D4Y3 \$3.95 each. Heller 1/72 scale Super Etendard and Exocet \$5.19, EC-121 Warning Star \$9.97, Constellation L-749 \$9.97, Italeri 1/72 scale AC-130 gun ship \$13.50, LA-5 \$2.25, Henschel HS-126 \$2.50, FW-190 D-9 \$2.25, Red Star 1/72 scale Yak-3 \$4.49, MiG-3 \$4.49, La-3 \$4.49, WWI Anatra D-3 \$5.25, ESCI 1/72 scale Harrier GR-3 \$4.59, Sea Harrier \$4.59, 1/12 scale F-16 cockpit \$11.95, Testors 1/48 scale YF-12 \$12.75. Super models 1/72 scale Reggiane RE-2000, RE-2001, RE-2002, Macchi C-202, C-205, Fiat G55, G55s, CR-32 \$3.79 each. MPC 1/72 scale Henschel HS-123 \$1.79, OS2U Kingfisher \$1.79, Lockheed U-2 \$3.49, F-5E Tiger II \$2.49, TBD-1 Devastator \$2.19, Avro Vulcan \$9.75, B-1B bomber \$9.75, 1/48 scale EA-6B Prowler \$9.75. Monogram 1/72 scale EF-111 \$3.95, F-105G \$3.95, F-15E \$3.95, SR-71 with drone \$5.59, B-1B bomber \$10.50, 1/48 scale B-24D \$10.50, F-106A, F-106F, A-18, F-105G, F-14, F-15, F-4C, F-4J \$5.59 each. F-84 Thunderstreak \$3.95, F-104C \$3.95, 1/32 scale Blue Thunder helicopter \$4.99, 1/144 U.S./USSR missiles \$5.99. Williams Bros. 1/32 Sparrowhawk \$7.95. Matchbox 1/72 scale Victor KC-135. LS 1/144 scale A-10 \$2.25, P-3C Orion \$5.25. Tamiya 1/48 scale A6M3 Zero (Hamp) \$7.50, A6M5C Zero Type 52c \$7.50, Ki-84 Frank \$5.98, Zero Type 21 \$5.98, Rufe (Zero with floats) \$6.75, Sea Harrier \$8.98, A-10 \$15.75, F-15A Eagle \$15.75, 1/32 scale F-14 Tomcat \$15.75. Revell 1/48 scale B-1 bomber \$24.75, F-16 Thunderbird set of four \$18.75, 1/32 scale F-15E Strike Eagle \$16.50, F-14A Tomcat \$16.50, 1/144 scale KC-135 strato-tanker \$3.75, C-130 Hercules \$3.75, KC-10 jet tanker with F-15 \$6.95, B-52H \$6.95, C-5A Galaxy \$14.25. Aero Club 1/72 and 1/48 scale ejection seats \$2.69 per pack. Italeri 1/35 scale Armor U.S. M-109 self-propelled howitzer carriage/155mm SP gun \$7.95. Tamiya 1/35 scale Armor M1 Abrams \$10.50, Ford Mutt with tow \$4.50, M-247 Sargeant York tank \$10.50, Israeli Merkava tank \$14.98, U.S. M60A1 \$10.50, livestock set \$2.98, M-151 A-2 Ford Mutt \$2.98, Nichimo armor 1/35 scale M-41 Sherman \$7.50, Panzer IV-F2 \$7.00, Panther G \$8.99, Tiger I \$8.99, Tiger II (Porsche turret) \$8.99. This is a small selection of some of the kits we have in stock. Please send two 20¢ stamps for our latest catalog. Ordering instructions: Orders under \$10 add \$1.50 shipping fee, over \$10 add \$2. MasterCard, Visa, and COD orders accepted. Phone orders also accepted. Phone (315) 733-3741. All New York State residents add 4% sales tax.

**Free catalog.** All new for winter 1984/1985. Some of the finest in historical models and miniatures. GHQ, Tradition, Stone Mountain, Barton, and much more. All scales. The new catalog now includes plastic model kits, accessories, books, games, and more. Plus free monthly newsletter. All still free. The Model



90245.

**Tradition-Scandinavia** 30 mm figures by Charles Stadden and "Willie" 30 mm figures by Edward Suren. Some of the finest figures in any scale. Perfect for dioramas. For the serious collector and artist. Catalog \$1, refundable with first order. Dealer inquiries invited. The Model Shoppe, 323 1/2 Richmond St., El Segundo, CA 90245.

**Armor and military vehicle book specialist.** Hundreds of new titles available from our extensive stock. Tanks, SPGs, jeeps, trucks, etc. WWII, modern, etc. Many hard-to-get books from overseas, some exclusive with us. Also military insignia and uniform books and references. Member American Booksellers Association. Send three stamps or \$1 for latest 24-page illustrated catalog. Portrayal Press, P.O. Box 1913-W, Bloomfield, NJ 07003. (201) 743-1851.

**FS 595a equivalents** aircraft colors WWII. Germany, Great Britain, Russia, France, U.S., Finland, Australia, Japan, Italy, plus bibliography, \$2 check, money order, cash, or stamps to Mike Franklin, IPMS Tracks and Props, 507 Donovan, Bellingham, WA 98225.

**Metals for casting models.** Lead, tin, antimony, bismuth, etc., and standard and custom alloys of them. Also fluxes and bottom pour ladles. We are a refinery serving manufacturers and individuals direct. Send \$2 for our catalog now. Arthur Green, 485 S. Robertson Blvd., Beverly Hills, CA 90211. (213) 274-1283.

civil war, Napoleon, fantasy, and middle ages made with pewter or lead. Also 54 mm miniature hand-painted soldiers. Priced from \$5.95 up. Send \$1 for catalog and free gift offer with each order. Rush to: Showcase Miniatures, P.O. Box 1011, Hutchinson, KS 67504-1011.

**Kit building supplies** our specialty. We stock all major lines of paints and adhesives. Convenient, dependable service. SSAFE for list. Barr & Company, P.O. Box 6310, Baltimore, MD 21230-0310.

**T34/85 turrets** model 1944, 1/35 scale, cast resin. Fits your T34/43 hull. \$9.75 each, postage included. John Morgan, 25418 Charles Ave., Hayward, CA 94544. (415) 886-1624.

**Clear plastic for Mattel Vac-U-Form:** 020 clear vinyl is cut to size and ready to use, makes superior moldings for canopies, etc. New low prices: 20 sheets for \$4, plus \$1 postage; 50 sheets for \$8, plus \$1.50 postage. New value-pak: 100 sheets for \$15, plus \$2 postage. Free State Scale, Route 5, Box 118, Hagerstown, MD 21740.

**Air International** bound volumes 1 through 19. Perfect condition, \$250, UPS included. I need Monograms P-51 Phantom Mustang. David Felstein, 4010 Hulman, Terre Haute, IN 47803. (812) 232-1982.

**Convert-A-Kits:** Quality scale resin conversion parts and kits. Our 30 kit 1/76 scale line includes BT-5, BT-7, T-60, BA-10, Stalins I-II-III, Marder III, Sdkfz 231, Greyhound, SU-100, PzKfw IV, StuG IV, Cromwell, and

ary releases include M3A3, M5, M113, Leopard ARV, Leopard A3, Leopard II. New 1/35 scale line will include M4 composite hull, T-34/85 turret, M3 early turret. Send SSAFE for complete list and order form. Convert-A-Kits, P.O. Box 17733, Rochester, NY 14617.

**For sale:** Czech master resins. Over 30 different types, including 1/48 I-16. Some of the best prices in the U.S. Send SSAFE to Paul Hering, 350 Woodland Dr., Hempstead, NY 11550.

**Mail order slot car parts and accessories.** HO, 1/32, 1/24. Send \$1.50 for information. State scale. Race World, P.O. Box 4, Bellevue, KY 41073.

**APC Hobbies,** Box 122, Earlsville, VA 22936. MasterCard and Visa. Phone (804) 973-2705. Italeri 1/72 AC-130A \$15, 1/35 M109 \$8, M108 (105MMSPG) \$12, Airfix 1/72 Hind D \$8.75, 3042 Hormone \$5.25, 3014 BV 141 \$5.25, Roland CII \$5, ESCI 1/72 9032 F5A \$5, 9036 AV-8A \$5, 216 Zula accessories \$2. Monogram 1/144 U.S.-USSR strategic missiles \$6, Matchbox 1/72 Victor K2 \$13.50. MPC 1/72 Vulcan \$9.75, 1/72 U-2 \$3.50, 1/48 EA-6B \$9.75, Exact Vac 1/48 DUCK \$8.75, F-40N \$6.95, Yak-9 \$6.95, 1-116 \$6.95, Wing Vac 1/48 O2U-1 \$16.95, Yak-36 \$21.95. Wings 1/72 P-51H \$6.95, Yak-6 \$8.95, BV 155 \$6.95, Yak-36 \$11.95. Postage per order: \$1.50.

#### WANTED

Wanted: Marx plastic play sets, partial or

dividual Marx figures. Elastolin and lineal composition figures also wanted by private collector. Don Brett, 9 Netherton Terrace, Morristown, NJ 07960. (201) 267-7919.

**Wanted:** Air International hardbound Volume 8. Will pay top price. Please write to Mark Shanks, 145 College, St. Charles, MO 63301.

**Wanted to buy.** I need the following magazines: Scale Auto Enthusiast issues nos. 1 through 4. Will pay top price, or will trade for any of my copies of International Modeler magazine, June 1974 to Summer 1979. If interested, please write to Jim Coppinger, 456 Westside Ave., Jersey City, NJ 07304.

**Wanted:** Large plastic scale model of dinosaur and tyrannosaurus made by Monogram or Aurora. Jack Smith, P.O. Box 7544, Orlando, FL 32804.

**Will buy any kits** that you no longer intend to build. Aircraft, armor, cars, figures, etc. Phone or send list to APC Hobbies, Box 122, Earlsville, VA 22936. (804) 973-2705.

#### EVENTS

**Carolina Model and Hobby Expo:** Charlotte, N.C. Merchandise Mart, 2500 E. Independence Blvd. November 30-December 2. Open Friday, noon to 9:30 p.m.; Saturday, 10 a.m. to 6:30 p.m.; Sunday, noon to 6 p.m. Admission \$2.50; under 12, \$1. Exhibitor information: Carolina Model and Hobby Expo, 3452 Odell School Rd., Concord, NC 28025.

When writing to advertisers, please mention you saw their advertisement in FINESCALE Modeler

## LOCAL HOBBY SHOP DIRECTORY

### TELL YOUR HOBBY RETAILER YOU SAW HIS AD IN FSM

Local Hobby Shop Directory listings are available for the next twelve issues for \$120 (payable in advance) or for the next six issues for \$66 (payable in advance), or at \$11 per issue (billed to established accounts for a minimum of six insertions). Ads will be set in standard listing typography. All insertions must be consecutive and may be charged if you have credit established with us. No mention of mail order business or area code permitted.

**CLOSING DATE:** Jan/Feb issue closes October 15, Mar/Apr issue closes December 15, May/June issue closes February 15, Jul/Aug issue closes April 15, Sep/Oct issue closes June 15, and Nov/Dec issue closes August 15.

#### ARIZONA — Glendale

Specialized for the detail modeler.  
Complete reference library.  
Headquarters for ship models & parts.

##### VAL'S HOBBY HANGAR

5858 W. Camelback Rd. 934-6174

#### ARIZONA — Phoenix

The hobby shop for the scratch model builder, including plastic kits, landscaping materials, basswood, balsawood, hardwoods and HO & N scale trains.

##### SCALE MODEL SUPPLIES

2416 E. Thomas Rd. 956-1279

#### CALIFORNIA — Anaheim

Everything for the model ship builder; RC boats, cars, planes, military, science, tools, books & rocketry. AT HOBBY CITY. Open Mon-Fri 10-8. Sat & Sun 10-6.

##### CENTURY MODELS

1238 Beach Blvd. 821-8320

#### CALIFORNIA — El Cajon

Plastic aircraft, armor, ships, cars, and sci-fi kits. Also 1/43 die-cast cars. Open Mon-Fri 11-6. Sat 10:30-5. Sun 12-4.

##### MILITARY EMPORIUM

700 N. Johnson #N 447-6662

#### CALIFORNIA — El Segundo

One of the finest in historical models and miniatures. Complete selection of plastic model kits, miniatures, in all scales, accessories, books and much more. Hours: Mon-Fri 10-7. Sat 9-6.

##### THE MODEL SHOPPE

321 1/2 Richmond St. 322-5001

#### CALIFORNIA — Garden Grove

Military kits, aircraft from around the world. Plastic armor, aircraft, wargames, books, paints, tools. Open Mon-Thur 12-8 pm. Fri 12-8:30. Sat 10:30-7. Sun 12-5.

##### BROOKHURST HOBBIES

12741 Brookhurst Way 636-3580

#### CALIFORNIA — Lakewood

Importers of scale models, accessories, supplies, books & magazines from around the world plus all domestic lines.

##### THE MILITARY SHOP

Lakewood Center Mall No. 128 630-5556

#### CALIFORNIA — Los Angeles

Trains, all makes & sizes, new & used. Scenery, figures, structure kits, tools, paints, scratchbuilding supplies, books. We buy old trains & toys. Closed Sunday

##### ALLIED MODEL TRAINS

10938 W. Pico Blvd. 475-0463

#### CALIFORNIA — Los Angeles

We stock Revell, Monogram, AMT, Tamiya, Testor, Hasegawa & more. Tools & supplies. Also RC planes, cars, boats, HO & N trains. Open Monday-Saturday 10:15-6 pm.

##### NATICK STORE

209 W. 4th St. (Downtown) 626-3339

#### CALIFORNIA — Los Angeles

Plastic kits, military & fantasy miniatures. Plus paints, tools and accessories. Open Mon-Thur 9-5. Fri & Sat 9-7. Sun 11-5.

##### OUR STORE

5011 York Blvd. 256-3577

#### CALIFORNIA — Orange

Complete stock of styrene, paints, supplies & kits for modelers. One of Southern California's most complete stocks of model railroad supplies from #1 ga. to Z ga. Open 7 days.

##### FRANK'S HOBBY SHOP

6667-668 N. Tustin Ave. 639-9901

#### CALIFORNIA — Ontario

We carry the tools, wood, plastic, and kits to complement any hobby field. Mon-Fri 10 a.m.-7 p.m., Sat 10 a.m.-6 p.m.

##### JACK'S HOBBYCRAFTS

2509 So. Euclid 984-8700

#### CALIFORNIA — Pasadena

Wide selection of models featuring; aircraft, cars, ships, and military models. Also building supplies, books, paints, decals, parts, and tools.

##### THE MODEL WORKS

1655 E. Colorado Blvd. 793-6061

#### CALIFORNIA — Sacramento

Huge selection of foreign and domestic plastic kits. Books, games, figures, rockets, trains, paints and supplies. We special order.

##### RIVERSIDE HOBBIES

6407 Riverside Blvd. 392-9739

#### CALIFORNIA — Upland

One of the largest selections of kits, reference material, and accessories in the southwest.

##### J&M HOBBIES

1655 N. Mountain 985-9212

#### CALIFORNIA — Walnut Creek

Military kits, books, games, and figures. Open 11 a.m. to 5:30 p.m. daily.

##### CENTURION MILITARY HOBBIES

3087 N. Main St. 937-2623

#### CALIFORNIA — Westminister

New in Orange County! Full line of model aircraft, armor, ships, cars, space figures, books, paints, decals, art. Open 7 days. Owner member I.P.M.S. USA.

**ACCU-SCALE MODELS & HOBBIES**  
6454 Westminister Ave. 898-9591

#### COLORADO — Grand Junction

Western Colorado's complete hobby center.  
Mon-Fri 10 a.m.-6 p.m., Sat 9:30-5:30.

##### THE HOBBY HUT

1125-27 North Ave. 242-8761

#### COLORADO — Loveland

HO & N gauge trains, Märklin, plastic models. Wooden ships, wood supplies, paint supplies. X-acto and Dremel tools, model rockets. Open Mon-Fri 10-5:30. Sat 10-5. Sun 12-5.

##### THOMPSON'S HOBBIES

1730 W. Eisenhower Blvd. 669-2326

#### CONNECTICUT — Bridgeport

Most major and obscure brands. Trains, military, autos, boats, ships, RC cars. Collector kits

##### FINE SCALE HOBBIES

3488 Fairfield Ave. 366-0116

#### CONNECTICUT — Cos Cob

Trains, planes, armor, doll houses and miniatures. All hobby accessories.

##### HOBBY HOUSE

405 E. Putnam Ave. 869-0969

#### CONNECTICUT — Enfield

Old kits & latest releases. One of the largest selections of military and aircraft on East Coast. Near Bradley Air Museum. Open 7 days a week.

##### CRAFTEC HOBBIES

128 South Road 749-0614

#### CONNECTICUT — Manchester

Complete plastics, cars, planes, trucks, ships. Military, diorama supplies, decals.

##### THE TRAIN EXCHANGE

71 Hilliard St. 646-0610

#### CONNECTICUT — Milford

#1 in specializing in hard-to-find models, domestic and foreign.

##### HOBBY HAVEN

395 Boston Post Rd. 874-4434

#### CONNECTICUT — Stamford

Complete line of plastic kits, aircraft, ships, military models, all paints and supplies. Friendly service. Open daily 10-5:30.

##### HOBBYCRAFTS, INC.

Crescent St. 323-1736

#### FLORIDA — Ft. Lauderdale

Full service shop for - beginners to craftsman - kits to finished models. Domestic & import lines. Large selection of kits & supplies for all scales. Complete tool & finishing department.

##### WARRICK CUSTOM HOBBIES

3250 Davie Blvd. 791-1156

#### FLORIDA — Ft. Myers

Imported & domestic plastic & wood models. HO, N, Z trains. Rockets, D & D, games, tools, supplies and magazines. Open daily.

**CARL WILSON'S CLEAR TRACK LTD.**  
3506 Palm Beach Blvd. 322-0165

#### FLORIDA — Orlando

Excellent selection of plastic model kits, paints and accessories. Open Mon - Sat 10-6. Fri evenings until 6. Closed Sunday.

##### BOB'S HOBBY CENTER, INC.

7333 Lake Underhill Rd. 277-1248

#### FLORIDA — West Palm Beach

Fine tools. Supplies. Special orders. Mon-Fri 9:30-6. Sat 9:30-3. Closed Sunday.

##### CRAFT HOUSE HOBBY SHOP

1079 N. Military Trail 683-0764

#### GEORGIA — Smyrna

HO & N scale for your railroading enjoyment. Complete line of plastic models and paints. Open daily 10-7. Sat. to 5. Closed Sunday.

##### HOBBY JUNCTION

3260 S. Cobb Drive 432-2538

#### GEORGIA — Warner Robins

Military models, books, plastic models, and paints. Also a complete line of HO and N gauge trains, RC planes, and rockets.

##### PARKERSON'S HOBBY SHOP

1727 Watson Blvd. 922-7944

#### ILLINOIS — Chicago

Complete stock domestic/imported N, HO, O kits and ready-to-run trains and supplies. Lionel, LGB, Unimat; crafts, boats, airplanes, live steam, collector's items.

##### TROST HOBBY SHOP

3111 W. 63rd St. 927-1400

#### ILLINOIS — Des Plaines

A complete model shop. Plastic kits, paints, decals, diorama materials, books, detail parts. Close to O'Hare. Open 7 days a week. M, Th, F 10-9. Tu, W 10-6. Sat 10-5. Sun 11-3.

##### DES PLAINES HOBBIES

713 Center St. 297-2118

#### ILLINOIS — South Holland

One of Chicago area's largest selections of plastic kits. 200 military, 500 cars, 400 planes, 100 ships, 50 trucks.

##### SCALE MODELS

1048 E. 162nd 339-3922

#### IOWA — Des Moines

One of the Midwest's best selections of plastic models (injected & vacuumformed), paints, decals, books, tools & supplies.

##### IOWA SERVICE HOBBY

2706 Beaver Ave. 279-1173

#### KANSAS — Overland Park

One of the Midwest's finest selections military models, miniatures, books, modeling supplies, war and fantasy games.

##### THE KING'S CROWN

6860 W. 105th St. 341-6619



**KANSAS — Wichita**  
Plastic kits galore. Over 3,000 new and golden oldies. Scratchbuilding materials and hobby supplies. Also large R/C dept., trains, miniatures and rockets.

**THE HOBBY SHOP**  
2014 S. Oliver 682-9021

**KENTUCKY — Hopkinsville**  
A full line model shop with an extensive selection of plastic kits & diorama, miniature, and gaming supplies. We cater to the serious hobbyist.

**THE HOBBY SHOP**  
Pennyville Mall 886-5747

**MASSACHUSETTS — Worcester**  
"The Home of Hobbies since 1946."  
Plastic airplanes, ships, autos, paints, tools, & supplies. Complete line armor. MC & VISA.  
Daily 9:30-5:30. Wed 'til 8 pm.

**HENRY'S HOBBY HOUSE, Inc.**  
34 Franklin St. 754-5604

**MICHIGAN — Ann Arbor**  
Kits Galore-Airbrushes & Accessories.  
Special orders for those hard-to-find items.  
Mon-Fri 11 to 9, Sat 9:30 to 5:30.

**RIDER'S HOBBY**  
115 W. Liberty St. 668-8950

**MICHIGAN — Marquette**  
Plastic and wood models:  
Planes-cars-trucks-ships  
decals-glues-paints-tools.

**HOBBY WORLD**  
124 S. Front St. 228-4098

**MICHIGAN — Westland**  
Scale model trains, cars, planes, ships, armor and accessories. Scratch builders supplies, paints, airbrushes & brushes, books, games & magazines. Mon-Fri 10-6. Fri til 7. Sat 10-5.

**DAVE'S HOBBY & TV**  
29026 Warren Road 422-4464

**MISSISSIPPI — Jackson**  
One of the South's finest selections of basic and hard to get imports.  
Books, tools, airbrushes, styrene & games.  
Open Mon. through Fri. 10-6. Sat. 10-5.

**CREATIVE CRAFTS & HOBBIES**  
Maywood Mall 982-2661

**MISSOURI — Kansas City**  
1000's of military & fantasy miniatures.  
100's of fantasy & military games.  
Models, MicroScale, books, accessories.

**YANKEE DOODLE GAME & HOBBY**  
6831 Longview Rd. 761-1113

**MISSOURI — St. Louis**  
Everything in hobbies.  
MasterCard, Visa, and checks welcome.  
Two convenient locations.

**ASTRO HOBBY HOUSE COMPANY**  
1245 S. Laclede Station Rd. 961-7093

**NEBRASKA — Bellevue**  
Just outside the Strategic Air Command  
Museum means plastic models are our  
specialty. Worth a visit.

**AIR-CRAFT HOBBIES**  
706 W. Mission 291-6630

**NEVADA — Reno**  
Planes, trains, boats, cars, crafts,  
games, books, tools, and supplies.  
Open daily 10-6. Fri 10-9. Closed Sunday.

**HIGH SIERRA MODELS**  
953 W. Moana Lane 825-9098

**NEW JERSEY — Cranford**  
One of the best little hobby shops in Jersey.  
Plastic kits, wooden ships, HO & N trains.  
Paints, books, fabulous displays.

**DICK'S HOBBYLAND**  
16 North Union Ave. 272-7660

**NEW JERSEY — Old Bridge**  
Role playing games, books, magazines,  
hobby kits from around the world.  
Military and fantasy miniatures.  
HO trains and paints.

**ADVENTURE HOBBIES**  
596 Englishtown Rd., near Rt 18 251-2030

**NEW JERSEY — Pennsauken**  
The latest in plastic military kits, books,  
magazines, paints and decals. We have  
automobile and ship kits.

**TED'S ENGINE HOUSE**  
6307 Westfield 662-0222

**NEW JERSEY — Red Bank**  
One of New Jersey's most complete hobby  
centers. Open Mon-Wed 10-6. Thur & Fri 10-8.  
Sat 10-5. Sun 12-4.

**HOBBYMASTERS**  
62 White Street 842-6020

**NEW YORK — Day Shore**  
Complete selection of models;  
military, airplanes, cars.  
Building supplies, paints, and tools.

**SOUTH SHORE HOBBIES**  
577 E. Main St. 665-7707

**NEW YORK — Brooklyn**  
Complete line of military kits, both domestic  
and imported. Paint and accessories.  
Mon, Thur, Fri 10:30 a.m.-8:00 p.m.,  
Tue, Wed, Sat 10:30 a.m.-6:00 p.m.

**WALT'S HOBBY SHOP, Inc.**  
7909 5th Ave. 745-4991

**NEW YORK — Hicksville**  
One of Long Island's fastest growing model  
shops. Military airplanes, cars, RR building  
supplies, paints, decals and tools. Open 7 days.  
Mon-Fri 10-9. Sat 10-6. Sun 10-4.

**RIGHT TRACK HOBBIES**  
113 Broadway 433-0123

**NEW YORK — Huntington**  
In an independent review of hobby shops,  
Newsday described the Caboose: "An absolute  
dream. Jampacked with goodies."  
Daily 9:30-6. Fri. to 8. Sun. by appointment.

**THE CABOOSE, INC.**  
208 Wall Street 427-8288

**NEW YORK — Kingston**  
Full service hobby shop. Balsa, Plastruct,  
miniature lumber and building supplies.  
Open Mon-Thur 10-6. Fri 10-9. Sat 10-5.  
Closed Sunday.

**J AND J'S HOBBIES, INC.**  
785 Broadway 338-7174

**NEW YORK — Middletown**  
One of the oldest & most complete railroad  
shops in area. We stock HO, N, O, S, Z, HO n3 &  
On3. Try us for your hard-to-find items.  
Open Mon-Sat 10-5. Thur & Fri to 7pm.

**AREA MODEL TRAINS, INC.**  
15 West Main St. 343-7141

**NEW YORK — NY (Chinatown)**  
Complete series of military, aircraft, auto-  
mobiles, motorcycles, RC, rockets, battleships,  
tanks. Foreign import models plus paints, air-  
brushes, tools & accessories. Open 7 days 10-8.

**DIORAMA MODEL SHOP**  
37 Catherine St. 619-5785

**NEW YORK — NEW YORK**  
Plastic and wooden kits, rockets. We specialize  
in static and remote control ship models.  
Open Mon-Sat 9-7. Sun 11-5.  
Closed Sundays June, July & August.

**JAN'S HOBBY SHOP**  
1431A York Ave. 861-5075

**NEW YORK — Utica**  
Imported & domestic plastic models.  
HO & N scale trains. Rockets, air brushes,  
books, scratchbuilding supplies.

**DISCOUNT HOBBY CENTER**  
405 James St. 733-3741

**NEW YORK — Yonkers**  
Plastic military model kits, scratchbuilding  
& diorama supplies, metal figures, airbrushes,  
decals, how-to books, HO trains, D&D figures.  
Mon. 3-8, Tues. Fri. 10-8, Sat. 10-6, Sun. 1-5.

**ED'S HOBBY SHOP**  
847 McLean Ave. 237-1649

**OHIO — Cleveland**  
Airplanes, boats, RC, rockets, plastic kits,  
trains, books, tools, wargames.  
Mon-Fri 10-8:30. Tue-Wed-Thur-Sat 10-5.

**NATIONAL HOBBY, INC.**  
5238 Ridge Road 749-2450

**OHIO — Cleveland (Lakewood)**  
Large selection of aviation and military  
books and magazines, general hobbies.  
Open 7 days.

**WINGS HOBBY SHOP**  
17112 Detroit Ave. 221-5383

**OHIO — Columbus**  
All scales of imported and domestic aircraft,  
armor and miniatures. Decals, books, paints.  
12-9 daily, 12-5 Sunday

**STRETE HOBBIES**  
3655 Sullivant Ave. 279-6959

**OHIO — Mansfield**  
Plastic military model kits, military medals,  
books, coins, military miniatures,  
D & D, wargames and hobby supplies.  
Mon-Fri 11 a.m.-6 p.m. Sat 12-6 p.m.

**THE PANZER HUT**  
1345 Park Ave., W. 529-4339

**OHIO — North Canton**  
Great selection of domestic & imported kits,  
how-to books, airbrushes, tools, paint, wood  
& glue. HO & N trains, rockets, games. R/C  
specialists. Hobby consultants. Special orders.

**MODELER'S HAVEN**  
4255 Portage N.W. 499-6000

**OHIO — Oak Harbor**  
Plastic & wood kits, scratchbuilding  
and diorama supplies.  
Tools and accessories.  
Personalized and friendly service.

**OAK HARBOR HOBBIES**  
136 W. Water St. 898-1300

**PENNSYLVANIA — Allentown**  
Collector's corner; military figures, the latest  
in armor & aircraft kits. War gaming,  
fantasies. Complete line of paints.

**ROSEMONT HOBBY SHOP**  
Trexler Mall 398-0210

**PENNSYLVANIA — Erie**  
Plastic kits, books, games, railroads. Metal  
figures, military & fantasy. Cockpit details,  
scratchbuilding & diorama materials & de-  
tails. Open Mon-Fri 11-8. Sat 9-5.

**PENN STATION MODEL SHOP**  
3435 West Lake Rd. 833-5423

**PENNSYLVANIA — Philadelphia**  
Plastic & balsa kits, cars, planes, ships,  
military modeling supplies, tools, paints.  
Badger, Paasche, BlueJacket ship fittings,  
trains, and miniatures.

**MANAYUNK HOBBIES & CRAFTS**  
4303 Main St. 482-1691

**PENNSYLVANIA — West Chester**  
Large selection of plastic kits,  
Waldron, Humbrol, Microscale.  
Full line of diorama materials,  
collector kits, tools and books.

**BRANDYWINE HOBBIES**  
1502 West Chester Pike 696-9049

**RHODE ISLAND — Pawtucket**  
All types of model kits, domestic & imported,  
old & new, for all interests; plus books,  
paints, magazines, tools and supplies.  
Open Mon-Fri 4 p.m.-8 p.m. Sat 10 a.m.-6 p.m.

**PARENT HOBBIES**  
270 West Ave. 722-2398

**RHODE ISLAND — Warwick**  
Plastic military kits, Tamiya paints,  
war games, model railroad HO, O, N scales  
Open Monday, Wednesday & Saturday 10-6.  
Tuesday, Thursday & Friday 10-8.

**J & R TRAINS & HOBBIES INC.**  
830 Post Road 461-1371

**SOUTH CAROLINA — Charleston**  
Variety of plastic, wood & die cast kits.  
War games, books, paints and tools.  
Open 8:30-6 daily.

**CHARLESTON HOBBIES**  
1011 St. Andrews Blvd. 763-1429

**SOUTH CAROLINA — Columbia**  
One of the Southeast's most complete hobby  
shops. Plastic kits, ships, wargames, model  
railroading, tools, rockets, books and much  
more. Daily 10-6. Fri 10-8.

**THE DUTCH DOOR HOBBY SHOP**  
1625 1/2 Broad River Road 798-3773

**TENNESSEE — Chattanooga**  
Hobby supplies for the craftsman in modeling  
autos, trucks, planes, armor, figures. Come  
see our customers' award winning displays.  
Open Mon.-Sat. 10 a.m.-9 p.m., Sun. 1-5 p.m.

**CHATTANOOGA HOBBY CENTER**  
5425 Highway 153 North 875-8231

**TEXAS — Abilene**  
For just about the best scale modeling and  
models. Monthly meetings.  
Open 9-5:30 Monday through Saturday.

**MAKER'S HOBBIES**  
715 Grape Street 673-3291

**TEXAS — Arlington-D/FW Metroplex**  
Kits-tools-details-wood-plastic  
Books-scenics-paints-R/C-D/D  
HO, N railroad layouts  
Mon-Fri 10-8, Sat 10-6. We are modelers.

**THE HOBBY HUB**  
903A Pioneer Pkwy W. 265-8101

**TEXAS — Austin**  
Our specialty is scale modeling.  
Wide selection of domestic and foreign kits,  
paints, tools, books and supplies.

**KING'S HOBBY SHOP**  
8810 Lamar 836-7388

**TEXAS — Denton**  
Large selection of airliner kits & decals.  
Vacuumform and plastic models.  
Scale R/C kits and supplies.  
Monthly specials.

**AIRPLANES, ETC.**  
718D Hercules 382-0950

**TEXAS — El Paso**  
Largest selection of aircraft and military  
models in west Texas. Also: Paints, books,  
Microscale decals and finishing products for  
modeling. Expert advice. 10 to 6:30 Mon-Sat.

**HAL'S HOBBY SHOP, INC.**  
No. 57 Sunrise Ctr. 755-1914

**TEXAS — Irving (Dallas Area)**  
Aviation books, profiles, magazines,  
imported plastic kits. HO, N scale trains,  
FAOW, R/C, U/C planes and cars.  
Mon 1-7. Tue-Sat 9:30-7.

**M-A-L HOBBY SHOP**  
108 S. Lee St. 438-9233

**TEXAS — Plainview**  
One of the finest selections of plastic kits in the  
Panhandle and South Plains. Aircraft, ships,  
military models, cars & trucks, paints &  
supplies. Open Mon-Fri 3-7. Sat 10-6.

**1st CAV. MODEL HOBBY SHOP**  
913 Columbia 293-9707

**UTAH — Roy**  
Complete lines of plastics, books, wargames  
and figures, accessories and paints with  
expert advice to aid you.  
Special ordering is our business.

**MATT'S MODELS**  
5649 S. 1900 W. 825-1400

**LIST YOUR SHOP HERE**  
**ATTRACT NEW CUSTOMERS**  
**MAKE MORE SALES**

**VIRGINIA — Virginia Beach**  
Specializing in Lionel, HO, N trains and  
accessories. Repair service available.  
Complete hobby & craft store. Daily 10-8.

**PEMBROKE STATION**  
4576-8 Pembroke Mall 490-2912

**WASHINGTON — Bellevue**  
One of Seattle's finest shops for the  
fine scale modeler. Open Mon-Tue 10-8.  
Fri & Sat 10-midnight. Sun noon-5.

**THE TRIPLE ALLIANCE**  
10328 Main Street 453-8939

**WASHINGTON — Bremerton**  
Old kit corner; dioramas specialist.  
Armor, aircraft, ships, figures  
and modeling supplies.

**THE EAGLE SHOP**  
107 Washington Ave. 479-4113

**WASHINGTON — Seattle**  
Scale model ships, trains, planes, tanks,  
military & wargaming miniatures, books,  
tools, decals, etc. Mon, Wed, Fri 12:30-6:00;  
Tue, Thur 12:30-8:00; Sat 10:00-6:00.

**American Eagles Inc. Military Hobbies**  
8556-58 Greenwood N. 782-8448

**WEST VIRGINIA — Nitro**  
The special shop for special people. All brands of  
plastic kits, all scales. A full line of parts for the  
perfectionist. Complete hobby & craft center.  
Open Mon-Fri 10-5:30. Sat 10-5.

**NITRO HOBBY & CRAFT CENTER**  
21st Street 755-4304

**WISCONSIN — Green Bay**  
Tools, paints and adhesives designed for the  
modeler. Kits covering all scales and types.  
Hard to find and special imports. Open Mon-  
Thur 10-5:30. Fri 10-8. Sat 10-4:30.

**RIVER CITY HOBBIES**  
500 E. Walnut 432-5835

**WISCONSIN — Madison**  
One of the Midwest's most complete hobby  
shops. Tools, plastic kits, wargames, model rail-  
roading, miniatures. Hours: 9-9 Mon & Fri, 9-6  
Tue, Wed, Thur, 9-5:30 Sat, 12-5 Sun.

**MIDVALE HOBBY SHOP**  
505 S. Midvale Blvd. 238-2233

**AUSTRALIA — North Territory, Darwin**  
Large range of plastic model kits.  
R/C aircraft, boats & cars.  
Model railroad supplies, games.

**Darwin Hobby Shop Centre, Pty., Ltd.**  
Shop 9, Winnelle Shop. Center. 818404

**CANADA — Fredericton, N. B.**  
The modelers store. Specializing in trains,  
armor, planes, war & fantasy games.  
Only quality lines stocked.  
Open Tue-Wed 9-5. Thur-Fri 9-9. Sat 9-5.

**THE RAILHEAD**  
384 Queen Street 454-1909

**CANADA — Kingston, Ontario**  
Serving the model builder since 1951.  
Always an outstanding variety of plastic kits  
R/C, railroad, figures, games, tools and  
books. Daily 9-5:30. Fri 9-9. Closed Monday

**LLOYD SHALES HOBBY SUPPLIES**  
208 Division St. 548-8427

**CANADA — Vanier, (Ottawa), Ontario**  
One of Canada's leading model shops.  
Complete line of military & aircraft kits,  
decals, paints and accessories.

**HOBBY HOUSE, LTD.**  
89 Montreal Rd. 748-7814



# Advertisers! Put your sales message in front of a \$13 million\* per year scale modeling market – in FSM!

More than 30,000 ready-to-buy scale modelers will see the ads in this issue!

For information on  
advertising, call or write:

\* Based on the FSM reader survey.

**FINESCALE MODELER**

**Fred Hamilton**  
**Advertising Sales Manager**  
**FINESCALE MODELER**  
1027 N. 7th Street  
Milwaukee, WI 53233  
Call collect at: 414-272-2060

## INDEX TO ADVERTISERS

WE BELIEVE that our readers are as important as our advertisers; therefore, we try to handle all readers' complaints promptly and carefully. If, within a reasonable length of time, you do not receive your merchandise or a satisfactory reply from an advertiser, please write to us. In your letter please detail exactly what you ordered and the amount of money you sent. We will then forward your complaint to the advertiser for action. If no action is ultimately obtained, we will refuse to accept further advertising from him. Address complaints to: FineScale Modeler, 1027 N. Seventh St., Milwaukee, WI 53233.

<b>A</b>	
A P C Hobbies	63
A T P, Inc.	68
A & W Industries	2c
Accu-Scale Decals	2c
Aero Gem	64
Aero Publishers, Inc.	12
Aero Research	2c
Armour in Detail	70
Articles of War Ltd	52
Auto World	36
Aviation Photographics	64
<b>B</b>	
Badger Air Brush	2b
Bare Metal Foil Co.	27
Bargains Galore	64
Battle Hobbies	14
Binks Manufacturing Company	15
Brookstone Company	64
Brufen Products	14
John W. Burns	17
BlueJacket Shipcrafters	6
<b>C</b>	
Cactus Air Force	12
Castolite	17
Clover House	27
Combat Models	69
Combat Series	68
Creations Unlimited	8
Cush	7
<b>D</b>	
D & J Hobby & Craft	69

Densa Fine Arts	2d
Discount Hobby Center	13
Dunbar Miniatures	35
<b>E</b>	
Empire-Pacific Ltd.	2
Evergreen Scale Models	64
<b>F</b>	
FineScale Modeler	7, 9, 18, 65, 66, 67, 74d
Floquil-Polly S Corp.	29
Paul Freiler's Historical Models	35
A. J. Fricko Co.	35
<b>G</b>	
Grandt Line Products	14
<b>H</b>	
Harold's Place	3
R. H. Hebner Dist.	26
Heritage Ship Builders	64
Hobbyland	14
Horizon	10
House of Miniatures	53
<b>I</b>	
IPMS/USA	70-
I/R Miniatures	27
Icarus Models	17
International Historic Films	17
International Modelers Supply Co.	63
Island Model Craft Supply	15
<b>K</b>	
Kalmbach - Books	19, 30, 75
Kalmbach - FineScale Modeler	7, 9, 18, 65, 66, 67, 74d
A. Kempes	71
Kit Collectors Clearing House	17
<b>L</b>	
Lencraft	13
Little Generals	13
<b>M</b>	
Mascot	74
McKean Models	7, 64
Metalizer Products	72
Micro Mark	36
Mil-Slides	73
Mini Craft Models	63
Model Expo	45, 73
Model Expo Publications	4

Model Rectifier Corp.	76
The Model Shoppe	17
The Model Works	2d
<b>N</b>	
Northeastern Scale Models	74
NorthWest Short Line	13
<b>O</b>	
Overland Models	2b
<b>P</b>	
Paper Models International	69
Plastic Military Models	2c
The Plastic Place	3
<b>Q</b>	
The Quartermaster	72
The Quartermaster Company	3
<b>R</b>	
R E H Distributing Co.	65
Repla-Tech International	17
The Rock Quarry	64
Riverside Hobbies	17
Rosemont Hobby Shop	12
<b>S</b>	
S A E Displays	64
San Antonio Hobby Shop	29
Scale Aircraft Modelling	50
Scale Models	6
Series 77 Miniatures	50
Stevens International	65
Strete Hobbies	63
<b>T</b>	
Thunderbird Models	71
Toy Soldier Review	6
<b>V</b>	
Victoria Products	7
Vintage Castings	5
<b>W</b>	
Waldron	2d
War Eagle	4
War & Pieces	71
White Eagle	63
Weapons & Warfare Publications	70
Williams Brothers	7
<b>X</b>	
X-Acto	71



# Here's your complete guide to airliner modeling!

## BUILDING MODEL AIRLINERS

By David Minton

\$6.95

- Welcome to airliner modeling
- Tools and materials
- Assembling the model
- Painting the model
- Applying decals
- Upgrading and converting models

### BUILDING MODEL AIRLINERS

is a superb new book that will show you how to build accurate scale models of airliners. In 48 pages, you'll find concise yet complete instructions on how to assemble, paint, and decal plastic airliner kits. You'll learn where to find the reference materials you need for airliner modeling, and you'll discover where to obtain and how to use specialized airliner modeling products – such as a full range of colorful airliner decals. And in BUILDING MODEL AIRLINERS, you'll also find information on upgrading and converting airliner kits. Add this remarkable new book to your modeling library – ask for BUILDING MODEL AIRLINERS, \$6.95, at your favorite hobby shop, or use the coupon below to order direct today!

#### KALMBACH BOOKS

DEPT. 38651

1027 N. Seventh Street, Milwaukee, WI 53233

Enclosed is \$ \_\_\_\_\_ for \_\_\_\_\_ copies of BUILDING MODEL AIRLINERS at \$6.95. Include for postage and handling: U. S. \$1; foreign \$1.50. Wisconsin residents add 5 per cent sales tax.

Name \_\_\_\_\_

Street \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Charge to: ☐ MASTERCARD  
☐ VISA

Exp. Date \_\_\_\_\_

Card Number \_\_\_\_\_

Signature \_\_\_\_\_



# Only MRC-Tamiya could put this much horsepower on one page...

## 1/12 BIG SCALE RACE CAR SERIES

1208 DATSUN 240Z SAF  
1210 DATSUN 240Z G  
1211 HONDA F-1 LIMITED EDITION  
1220 PORSCHE TURBO RSR 934  
1221 TYRRELL P34 FORD F-1  
1222 JPS MARK III TEAM LOTUS  
1223 PORSCHE 935 TURBO  
1225 FERRARI 312 T4  
1226 RENAULT ELF

## 1/24 SCALE SPORTS CAR SERIES

2401 MARTINI PORSCHE 935 TBO  
2402 BMW 310i RACING  
2403 LANCIA STRATOS TURBO  
2406 LAMBORGHINI COUNTACH  
LP500S  
2407 TOYOTA CELICA LB TBO GR5  
2408 VOLKSWAGEN GOLF RAC GR2  
2410 MARTINI PORSCHE 935-78 TBO  
2411 ALPINE RENAULT A442 B TBO  
2412 MARTINI PORSCHE 936-78 TBO  
2414 FORD CAPRI  
2415 DATSUN 280Z W/T-BAR ROOF  
2416 MAZDA SAVANNA RX-7  
2417 DATSUN BLUEBIRD TBO SSS-S  
2418 DATSUN LEOPARD  
2419 TOYOTA SOARER TBO 2000 VR  
2420 DATSUN LEOPARD TRX TBO  
2421 TOYOTA CELICA XX2800 GT

2422 DATSUN SKYLINE  
2423 DATSUN SKYLINE 200RS  
2424 RENAULT 5 TURBO  
2425 DATSUN SKYLINE HARDTOP  
2426 HONDA CITY MOTOCOMPO  
2427 RENAULT 5 TURBO RALLY  
2428 DATSUN SKYLINE 2000RS HT  
2429 MERCEDES BENZ 500RS HT  
2430 HONDA CITY TURBO  
2431 AUDI QUATTRO  
2432 HONDA PRELUDE XX  
2433 TOYOTA CELICA SUPRA  
2434 CAMPUS FRIENDS SET  
2435 DATSUN 280ZT T-BAR  
2436 AUDI QUATTRO RALLY  
2437 MERCEDES BENZ LORINSER  
2438 TOYOTA SOARER 2800GT (D.U.)  
2439 MORRIS MINI COOPER  
2440 HONDA BALLADE SPORTS CRX  
2441 TOYOTA HIACE QUICK  
DELIVERY VAN  
2442 DATSUN 300ZX  
2443 DATSUN LEOPARD  
2444 HONDA CITY TURBO II  
BULLDOG  
2445 HONDA BALLADE SPORTS  
MUGEN  
2446 LOTUS SUPER 7 SERIES II  
2447 PORSCHE 956

2448 MORRIS MINI COOPER 1275S  
RALLY

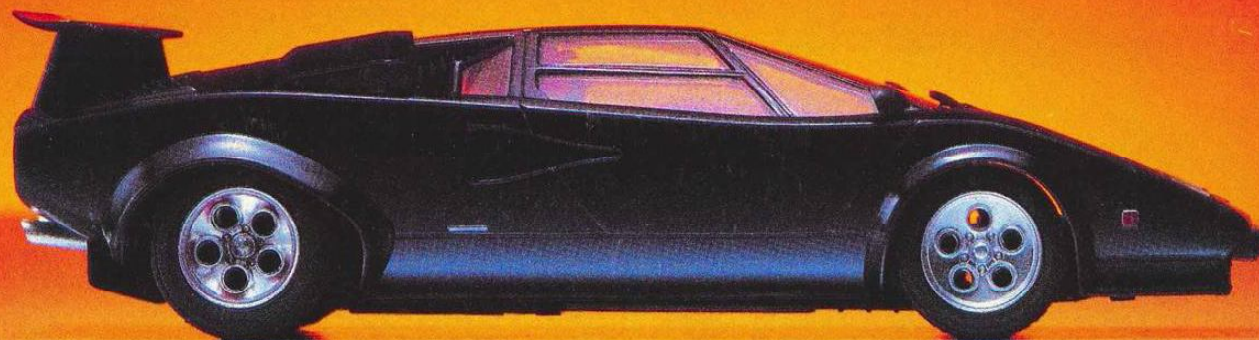
## 1/20 SCALE GRAND PRIX SERIES

2001 TYRRELL P34 6-WHEELED  
2004 JPS MARK III TEAM LOTUS  
2005 MARTINI PORSCHE 935-TURBO  
2008 KREMER PORSCHE 935 TURBO  
2009 TOYOTA CELICA TURBO  
2010 FERRARI 312TS  
2011 MOTOR RACING TEAM  
2012 LIGIER JS11 FORD F-1  
2013 FIAT 131 ABARTH RALLY  
2014 SAUDI WILLIAMS  
2016 PORSCHE 928S  
2017 BRABHAM BT50 BMW TURBO  
2018 RENAULT RB30B F-1 RACER

66 magnificently crafted and faithfully reproduced kits. Build them all. And get the same satisfaction the master builders felt when building theirs. Only MRC could put this much horsepower on one page. Now you can put them all in your collection.

**MRC**™    
Model Rectifier Corporation  
2500 Woodbridge Ave.  
Edison, N.J. 08817

## and this much detail in every car.



(2406) Lamborghini Countach LP500S

When it looks this real, it's MRC-Tamiya.